

REPORT OF THE PROCEEDINGS

OF THE

NORTHUMBERLAND AND DURHAM

MEDICAL SOCIETY.

SESSION 1874-75.

NEWCASTLE-UPON-TYNE :

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1875.

OFFICERS FOR THE SESSION 1874-75.

President.

S. W. BROADBENT.

Vice-Presidents.

W. C. ARNISON, M.D.

J. S. DENHAM, M.D.

F. PAGE, M.D.

G. H. PHILIPSON, M.D.

Secretary.

BYROM BRAMWELL, M.B.

Committee.

H. E. ARMSTRONG.

LUKE ARMSTRONG, M.D.

M. BURNUP, M.D.

THOMAS HUMBLE, M.D.

C. CARR.

J. FRAIN, M.D.

R. S. PEART, M.D.

J. HAWTHORN.

J. RUSSELL.

Honorary Members.

T. M. GREENHOW, M.D., Roundhay, Leeds.

G. ROBINSON, M.D., London.

LIST OF MEMBERS.

Aitchison, A., jun., M.D.	...	...	...	...	Wallsend
Annandale, T.	...	...	...	...	Edinburgh
Armstrong, Luke, M.D.	...	...	...	...	Clayton Street
Armstrong, H. E.	...	...	...	...	Graingerville
Arnison, W. C., M.D.	...	...	...	...	Northumberland Street
Arundel, Shirley	...	...	...	...	Gateshead
Atkinson, J. I.	...	...	...	...	Wylam
Banning, R. J., M.D.	...	...	...	...	Gateshead
Barkas, W. J.	Ryehill
Barkus, B., M.D.	Gateshead
Bell, A.	Eldon Square
Berry, Dennis	Barnard Castle
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Black, J. G., M.D.	Cotherstone
Blandford, J. W.	Coxhoe
Bolton, Andrew, M.D.	Westgate Street
Brady, G. S.	...	...	...	...	Sunderland
Bramwell, John W., M.B.	...	...	...	...	North Shields
Bramwell, J. B., M.D.	...	...	...	...	North Shields
Bramwell, Byrom, M.B.	...	...	...	...	Blackett Street
Broadbent, Samuel W.	...	...	...	...	South Hetton
Brownlee, A. H.	...	...	...	...	Brandon
Budge, J. Tait	...	...	...	...	Jarrow
Burnup, M., M.D.	...	...	...	...	Derwent Place
Carr, C.	...	...	...	...	Eldon Square
Cockcroft, G. E.	...	...	...	...	Hurworth
Cook, R. F., M.D.	...	...	...	...	Gateshead
Coward, W. R.	...	...	...	...	Tyne Dock
Crowe, George W.	...	...	...	...	Hartlepool
Davis, R.	...	...	...	...	Wrekenton
Davis, R., jun.	...	...	...	...	Dispensary
Davison, R. S.	...	...	...	...	Newburn
Denham, J. S., M.D.	...	...	...	...	South Shields
Dixon, W. H., M.D.	...	...	...	...	Sunderland
Dodd, T. A. H.	...	...	...	...	Bentinck Villas
Douglas, Mordey	...	...	...	...	Sunderland
Douglass, George, M.D.	...	...	...	...	Gateshead
Easby, William	...	...	...	...	Darlington
Eastwood, J. W., M.D.	...	...	...	...	Dinsdale Park
Ellis, R.	...	...	...	...	Ryehill
Embleton, D., M.D.	...	...	...	...	Eldon Square
Fennell, Theodore	...	...	...	...	Washington
Fielden, S.	...	...	...	...	Shildon
Forster, Edward W.	...	...	...	...	Cullercoats
Foss, R. W., M.D.	...	...	...	...	Stockton-on-Tees
Fothergill, S.	...	...	...	...	Haswell
Fothergill, J. R., M.D.	...	...	...	...	Darlington
Frain, J., M.D.	...	...	...	...	South Shields
Galloway, Walter	...	...	...	...	Wrekenton
Galloway, John	...	...	...	...	Newcastle
Gammage, R. G.	...	...	...	...	Sunderland
Gowans, William	...	...	...	...	South Shields
Gibb, C. J., M.D.	...	...	...	...	Westgate Street
Gibson, C., M.D.	...	...	...	...	Eldon Square
Hardcastle, N.	...	...	...	...	Clayton Street
Hawthorn, J.	...	...	...	...	Portland Place
Heath, G. Y., M.D.	...	...	...	...	Westgate Street
Heffernan, E.	...	...	...	...	Spennymoor
Hind, Henry	...	...	...	...	Stockton-on-Tees
Hope, J.	...	...	...	...	Eldon Square
Hopwood, T. F.	...	...	...	...	Sunderland
Houseman, J., M.D.	...	...	...	...	Barras Bridge
Humble, T., M.D.	...	...	...	...	Eldon Square
Hume, George, M.D.	...	...	...	...	Westgate Street

Huntley, R. E., M.D.	...	...	...	...	Jarrow
Hutchinson, V., M.D.	...	...	...	...	Bishop Auckland
I'Anson, W.	...	...	...	...	Cumberland Row
Jackson, T. H., M.D.	...	...	...	...	Darlington
Jackson, Robert, M.D.	...	...	...	...	Jarrow
Jackson, E.	...	...	...	...	Darlington
Jeaffreson, C. S.	...	...	...	...	Hood Street
Jobson, J.	...	...	...	...	Bishop Auckland
Johnson, J. J.	...	...	...	...	Dispensary
Jones, F. D., M.D.	...	...	...	...	Washington
Kay, W. T.	...	...	...	...	Gateshead
Legat, Andrew, M.D.	...	...	...	...	South Shields
Levinge, Edward G., M.B.	...	...	...	...	Coxlodge
Lightfoot, R. T.	...	...	...	...	Northumberland Street
Linton, Ralph	...	...	...	...	Chester-le-Street
Lynn, Robert, M.D.	...	...	...	...	Cumberland Row
Macaulay, John, M.D.	...	...	...	...	Ryehill
Mackay, Alexander, M.B.	...	...	...	...	Crook
MacLachlan, Alexander, M.B.	...	...	...	...	Higham Place
Macrae, John	...	...	...	...	Gateshead
McBean, Samuel	...	...	...	...	Portland Place
McDowall, T. W., M.D.	...	...	...	...	Morpeth
McDonald, J. W., M.B.	...	...	...	...	Crook
Maddison, N. P.	...	...	...	...	Jarrow
Manford, F. W.	...	...	...	...	Regent Terrace
Manson, R. T.	...	...	...	...	Howden-le-Wear
Merson, John	...	...	...	...	Morpeth
Mickle, G., M.B.	...	...	...	...	Infirmary
Miller, J.	...	...	...	...	Eldon Square
Morgan, G. B.	...	...	...	...	Sunderland
Nesham, T. C., M.D.	...	...	...	...	Northumberland Street
Newcombe, F. W., M.D.	...	...	...	...	Gateshead
Newton, H. W.	...	...	...	...	Hood Street
Newton, R. C.	...	...	...	...	Barras Bridge
O'Hanlen, J. C.	...	...	...	...	Spennymoor
Page, F., M.D.	...	...	...	...	Saville Row
Peart, Robert S., M.D.	...	...	...	...	North Shields
Philpson, G. H., M.D.	...	...	...	...	Eldon Square
Reid, John	...	...	...	...	Castle Eden
Reoch, James, M.B.	...	...	...	...	Newcastle
Robson, James	...	...	...	...	South Shields
Robson, R. N.	...	...	...	...	Durham
Rolf, Alfred G.	...	...	...	...	Gateshead
Russell, J.	...	...	...	...	Percy Street
Shiell, W. R.	...	...	...	...	Chester-le-Street
Scotland, Thomas, M.B.	...	...	...	...	Regent Terrace
Smith, R. Ayre, M.D.	...	...	...	...	Sunderland
Smith, James	...	...	...	...	Blenheim Street
Stephens, T.	...	...	...	...	North Shields
Tennant, George, M.B.	...	...	...	...	Dispensary
Thornhill, J.	...	...	...	...	Bulman Village
Ward, H. D., M.D.	...	...	...	...	Blyth
Wear, Arthur T.	...	...	...	...	Newcastle
Wheatley, W. A.	...	...	...	...	Durham
Wickham, R. H. B.	...	...	...	...	Coxlodge
Williamson, J., M.D.	...	...	...	...	South Shields
Wilson, Adam	...	...	...	...	Pleasant Row
Wilson, R. H., M.D.	...	...	...	...	Gateshead
Wilson, Robert, M.D.	...	...	...	...	Alnwick
Wilson, Samuel	...	...	...	...	Westoe
Wilson, Thomas	...	...	...	...	Wallsend
Wilson, W. T.	...	...	...	...	Marlborough Crescent
Wood, T. O.	...	...	...	...	Kent County Asylum
Yeld, H. J., M.D.	...	...	...	...	Sunderland
Young, Ralph	...	...	...	...	New Bridge Street

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

THE annual meeting of the Northumberland and Durham Medical Society was held on Thursday evening, September 24th, 1874. Dr. Philipson, President, occupied the chair. The attendance of members was large.

The following gentlemen were elected members of the Society :—

Mr. John Galloway, Newcastle.

Dr. H. J. Yeld, Sunderland.

The names of the following gentlemen were proposed for election :—

Dr. McDowall, Morpeth Asylum.

Mr. Wm. Easby, Darlington.

Mr. G. Mickle, Newcastle Infirmary.

Mr. Thos. Scotland, Newcastle.

Mr. R. Davis, Newcastle Dispensary.

Mr. J. J. Johnson, Newcastle Dispensary.

Mr. James Smith, Blenheim Street, Newcastle.

Dr. J. W. McDonald, Crook.

The SECRETARY (Mr. Henry E. Armstrong) read the Annual Report, as follows :—

REPORT OF THE COMMITTEE.

Your Committee, in presenting the Annual Report, notice with pleasure the successful condition of the Society during the session 1873-4. Whether in point of numerical strength, attendance of members, or work done, it is in the highest degree satisfactory to be able to state that the last fully equals if not surpasses all previous sessions of the Society.

The numbers of the Society have been increased by the addition of 24 members. Six members have died; one has resigned on account of removal; and the name of one has been struck off for non-payment of subscription. The Society numbers therefore 120 members at the present time, a larger number than has ever before been reached.

Among those removed by the hand of death, your Committee notice with sorrow the name of Dr. Edward Charlton, who died on the 14th of May last, from rupture of the left ventricle of the heart, after an illness of but a few days' duration.

The interest Dr. Charlton always felt in this Society is shown by the active part he took in its affairs from the date of its commencement in 1848 till the last meeting, in March of this year, during all of which time he was a constant attender, and a zealous promoter of professional knowledge in every department. His attention was ever awake to subjects of broad interest and general importance, and the origin of the discussions on the Prevalent Diseases of the District was mainly due to his instrumentality whilst President of the Society in the session 1857-8.

The Reports record the numerous and valuable contributions to Pathology and professional literature which Dr. Charlton has brought before the Society during his lengthened term of membership. These include papers on a great variety of medical cases, written in the scant leisure of an extensive practice, each bearing marks of scholarly acquirement, close observation, and scientific knowledge. The interest and energy with which Dr. Charlton entered into all the objects of the Society, has conduced largely to its success, and the courtesy and urbanity for which he was distinguished have done much to develop good fellowship and kindly feeling among its members.

Your Committee also observe with feelings of pain that since the beginning of the session the Society has sustained the loss by death of five other members, viz., Mr. Hardy (Byers Green), Mr. Richard Clarke (Marlborough Crescent), Dr. Robert Lightfoot, Mr. S. H. L. Murray (New Bridge Street), and Mr. Thomas Creighton (Morpeth).

Owing to removal from this neighbourhood, Mr. C. S. Redmond has resigned. This your Committee regret, inasmuch as during the short space of time he has been a member the Society has been indebted to Mr. Redmond for several valuable papers and interesting pathological specimens.

Your Committee are sorry to announce that Mr. Henry E. Armstrong has intimated his wish not to continue as Honorary Secretary, in consequence of his professional engagements. For his careful and punctual attention to the various duties of his office, and for the efficient manner in which he has carried on the business of the Society, the Committee feel that he is deserving of the hearty commendation of the members.

The income, including a balance brought forward of £7 19s. 7d., is £65 9s. 7d. There has been an expenditure of £41 17s., leaving a balance of £23 12s. 7d. The unpaid subscriptions amount to £5 10s.

The consideration of Public Health holds a conspicuous position in the work of the session. The discussion on the Prevalent Diseases of the District has been carried on with much interest at every meeting, which probably accounts for the number of papers

on other subjects being less than during the previous session. To this interest the returns of the numbers and locality of the Zymotic Diseases of the Newcastle Dispensary, begun by Mr. H. E. Armstrong, late Resident Medical Officer, and continued by Mr. Tennant, present Resident Medical Officer, as also those of the Newcastle Fever Hospital, have greatly conduced; and your Committee express the hope that they may be continued.

An important feature in connexion with the Diseases of the District, is the Report of the Committee appointed to enquire into the causes of the high Death Rate in the Borough of Newcastle. This report was adopted by the Society, and printed copies of it were forwarded to the Mayor and each Member of the Town Council of Newcastle-upon-Tyne, to the Editors of the Newcastle-upon-Tyne Newspapers, and to each Member of the House Committee of the Newcastle Infirmary.

PAPERS READ DURING SESSION 1873-74.

Mr. C. S. REDMOND—1. On extra-uterine foetation. 2. Malignant disease of the stomach, &c.

Dr. CHARLTON—1. A case of post pharyngeal abscess. 2. Lead paralysis. 3. Cases of supposed poisoning.

Dr. NEWCOMBE—A complicated case of labour.

Dr. GIBSON—A rare form of obstructed labour.

Dr. EMBLETON—Cases of Hydrophobia.

Mr. C. CARR—Ulcer of Duodenum.

Mr. DAVIS—A form of Erysipelas.

SPECIAL COMMITTEE—Report on Death-Rate.

PATHOLOGICAL SPECIMENS.

Mr. ELLIS—Necrosed mastoid process.

Mr. REDMOND—1. Extra uterine foetus, with uterus, &c. 2. Malignant disease of stomach and pancreas. 3. Supposed intestinal worm. 4. Uterine hydatids.

Dr. CHARLTON—1. Diseased supra-renal capsules. 2. Perforating ulcer of stomach.

Dr. GIBB—1. Bristle from toe. 2. Fingers torn off, with tendons, &c. 3. Osteo-sarcoma of femur.

Mr. BROADBENT—1. Toes and tendons torn off. 2. Vesical calculi (female).

Dr. B. BRAMWELL—1. Organs after parturition. 2. Two cases of mitral stenosis. 3. Heart with fungoid growths on valves.

4. Aneurism of aorta. 5. Consolidated lung from a case of pneumonia. 6. Cancer of stomach.

Mr. JEAFFRESON—1. Malignant disease of humerus. 2. Upper limb removed for malignant disease.

Dr. HEATH—1. Diseased knee. 2. Syphilitic organs. 3. Cystic disease of testicle. 4. Two cases of adenoid disease of breast. 5. Pistol bullet removed from forearm. 6. Sputa, containing atropine discs. 7. Thimble removed from throat. 8. Portion of upper jaw and ethmoid removed on account of tumour.

Dr. PHILIPSON—1. Kidney, liver, and spleen after uræmia. 2. Kidneys from a case of uræmia.

Dr. ARNISON—1. Cancer of femur and tibia. 2. Malignant disease of humerus.

Dr. REOCH—1. Heart after recent pericarditis. 2. Phosphatic calculus from cœcum.

Mr. DOUGLAS—Cancer of tongue.

Mr. SAMUEL WILSON—1. Fibrinous plug expectorated in pneumonia. 2. Spontaneous aneurism of forearm.

Mr. CARR—Perforating ulcer of duodenum.

Mr. MORGAN—1. Malignant disease of humerus. 2. Cystic disease of breast.

Dr. EMBLETON—1. Magnetic iron ore from tea. 2. United fracture of fossil fish (*Ctenodus*).

Dr. NEWCOMBE—Encephaloid of testicle.

PATIENTS EXHIBITED.

Dr. HEATH—1. Congenital malformation 2. Successful case of removal of polypus from Basilar process. 3. Patient with cholesterine crystals in anterior chamber of eye.

Dr. L. ARMSTRONG—Case of primary excision of elbow joint.

Mr. DOUGLAS—Patient after excision of tongue.

The Committee recommend that the following addition be made to the 9th rule of the Society:—"Such person to be deemed ineligible for proposal for re-admission as a member of the Society until such arrears are paid."

Dr. DENHAM moved the adoption of the report, with the addition to Rule 9.

The motion was seconded by Dr. JONES, and carried.

The PRESIDENT stated that he had received a communication from Dr. Gibb, which the Secretary read, as follows:—

Newcastle, Thursday, 4 p.m.

DEAR DR. PHILIPSON,—I am compelled to go to Morpeth, and fearing I may be unable to return in time, write you regarding the notice in my name relating to the late Dr. Charlton.

Knowing that there is a general desire to perpetuate his memory, and hearing that the Annual Report of the Society makes laudatory mention of his worth, and also that the numerous members of the Society fairly represent the profession of the North, it struck me, that the most successful way of accomplishing that object, would be for the Annual Meeting of the members to constitute the officers of the Society for the ensuing year a committee, with power to add to their number, and empower them to take such steps as they deem expedient to secure a lasting memorial of the late Dr. Charlton.

I should have been prepared to move a resolution to that effect, if I had found the feeling of the Annual Meeting considered such a procedure a legitimate business of the Society, and one that would meet with its support.

Believe me, yours faithfully, C. J. GIBB.

Mr. MORDEY DOUGLAS thought that, although the proposal of Dr. Gibb was not perhaps strictly compatible with the objects of the Society, it might nevertheless be considered by the members at the close of the meeting. It might be said that other worthy members of the Society had passed away, to whom memorials had not been raised, but this was no reason why the present opportunity should be let slip for perpetuating the memory of Dr. Charlton. Omissions of respect to the memory of other members of the profession was no excuse for an omission now. A memorial to Dr. Charlton could not therefore be invidious.

After some discussion, in which Dr. Gibson, Dr. Arnison, and Mr. Wickham took the chief part,

Mr. JEAFFRESON said that the subject did not come within the objects of the Society, and before it could be introduced, a special rule would have to be made.

Dr. L. ARMSTRONG moved and Dr. WILSON seconded, "that the standing orders be suspended for the consideration of the subject of the memorial to the late Dr. Charlton."

Mr. JEAFFRESON proposed and Mr. HEFFERNAN seconded, as an amendment, "that a special meeting of the members be called."

Dr. DENHAM thought that, to prevent misunderstanding, it would be well to postpone the subject till the end of the meeting.

The PRESIDENT then put the amendment of Mr. Jeaffreson to the meeting, for which the feeling of the meeting was as follows:—

For the amendment	...	...	...	...	...	10
Against the amendment	...	...	...	...	...	10

The President gave the casting vote against the amendment.

Dr. L. ARMSTRONG's motion was then put, and carried by a majority of one.

After some further discussion, it was moved by Mr. MORDEY DOUGLAS, seconded by Mr. BROADBENT, and carried:—"That the officers of the Society for the ensuing year be constituted a Committee, with power to add to their number, and that they be empowered to take such steps as they deem expedient to consider the subject of a lasting memorial to the late Dr. Charlton, and report thereon to the Society."

Mr. JEAFFRESON signified his intention of proposing, at the next meeting of the Society, that this last resolution was informally moved and informally carried.

On the motion of Dr. BURNUP, seconded by Dr. WILSON, it was carried by acclamation that Mr. Dodd be re-appointed paid Secretary for the ensuing year.

On the motion of Mr. CARR, seconded by Dr. WILSON, Dr. Page and Mr. Hawthorn were appointed scrutineers of the ballot papers for the election of Officers.

The first monthly meeting of the Society was held in the Library of the Infirmary, on Thursday, October 8th, 1874.

Dr. PHILIPSON, the retiring President, in introducing S. W. Broadbent, Esq., the new President, said:—"The official duty which I am called upon to perform this evening is to bid you farewell, as your President, and to introduce to your notice the gentleman who has been elected by you to succeed me. With a feeling of deep regard for the Society, over which I have had the honour to preside for the past two years, it is no small pleasure, no little solace to me to feel that I am succeeded in office by one so well deserving of your confidence. I am quite sure that Mr. Broadbent will not be wanting in zeal, in erudition, and in equity; and I feel assured that he will do more than justice to the office to which you have elected him.

Mr. BROADBENT then took the President's chair, and said:—"Dr. Philipson and Gentlemen,—I beg to thank you for the great honour you have conferred upon me in electing me President of this Society. Let me assure you that I feel your kindness with much pride and gratification. I cannot hope to preside over you with the same ability, dignity, and courtesy as has been shown by my predecessor, but my best services shall be at your disposal. I have always taken a deep interest in the proceedings of this Society. For my shortcomings, I shall throw myself upon your generosity and forbearance. Let us hope that our future meetings will be numerously attended, that we shall have practical papers, and that our discussions will be marked by the same good feeling

which has always characterised them. I again thank you, gentlemen, most cordially.

Mr. H. E. ARMSTRONG then rose and said he also wished, in vacating the post of Secretary, to thank the members of the Northumberland and Durham Medical Society for the kindness he had, during his two years of office, uniformly experienced at their hands. He had much pleasure in introducing to them their new Secretary, Dr. Byrom Bramwell.

Dr. B. BRAMWELL said: Mr. Armstrong and Gentlemen,—I beg to thank you most sincerely for the honour you have done me, in electing me your Honorary Secretary. I will do my utmost to discharge efficiently the duties of the office, and to further in every way the objects of the Society.

Dr. GIBSON moved a vote of thanks to the late President for the distinguished ability and courtesy with which he had conducted the business of the Society for the last two years. He felt sure that during no two years in its history had the Society achieved greater success, and at the present moment it stood in a peculiarly satisfactory position. He could not doubt that this happy condition of things was, to a large extent, due to the personal efforts of Dr. Philipson.

Dr. GIBB had much pleasure in seconding the motion proposed by Dr. Gibson.

The motion was carried with acclamation.

Dr. PHILIPSON thanked the meeting for the cordial and expressive manner in which they had received the proposal. He stated that he appreciated the terms of the resolution, and valued the expression of kind feeling evidenced towards him, but he was conscious that his actions had been far too vividly esteemed, and that very little merit was due to him for the success of the meetings of the two past sessions, the main credit rather being owing to the exertions of his colleagues in office, more especially the ex-Honorary Secretary, Mr. Henry Armstrong, and the Committee. To these gentlemen he felt what he owed, and he begged to offer his sincere acknowledgments. He also felt very grateful to the members for the uniform kindness, courtesy, and support which they had invariably accorded to him.

Dr. DENHAM proposed "That the hearty thanks of this meeting be given to Mr. H. E. Armstrong, the late Secretary;" and said that this motion required no words to recommend it to their notice. Every member of the Society must have been struck with the very exemplary manner in which Mr. Armstrong had performed the duties of the office. He had been uniformly obliging and courteous.

The satisfactory condition of the Society was a proof of the success with which Mr. Armstrong had fulfilled the duties of the office.

Dr. FRAIN seconded the motion.

The PRESIDENT had much pleasure in proposing that Dr. Denham's motion be carried by acclamation.

Mr. HENRY E. ARMSTRONG, rising, said: Mr. President and Gentlemen,—I beg to thank Dr. Denham for proposing, and Dr. Frain for seconding, the vote of thanks which you have been pleased to express to me in so cordial and agreeable a manner. Through your kindness, I have been Secretary to the Northumberland and Durham Medical Society for two years. I have occupied the position with pride and pleasure, for it has brought me into friendly and honourable communication with the profession of the two counties. The appointment is no sinecure—I am glad to think it has been least of all so whilst I have held it. But, though the duties have not been light, the cordial help I have had from the President and Committee—whom I am glad to take this opportunity of thanking—and the kind way in which you received my services and overlooked my deficiencies, have lightened the labour and increased the pleasure of being your Secretary. I beg to thank you all for the honour you have done me.

The following gentlemen were elected members of the Society:—

Dr. T. W. McDowall, Morpeth Asylum.
 Mr. Wm. Easby, Darlington.
 Mr. G. Mickle, Infirmary, Newcastle.
 Mr. Thos. Scotland, Newcastle.
 Mr. R. Davis, Newcastle Dispensary.
 Mr. J. J. Johnson, Newcastle Dispensary.
 Mr. James Smith, Blenheim Street.
 Dr. J. W. McDonald, Crook.

The following gentlemen were proposed for election:—

T. G. Beatson, B.A. (Cantab.), M.B., C.M. (Edin.),
 Newcastle Infirmary.
 S. Bernard, M.D. (Canada), L.R.C.P. (Lond.), Silksworth.
 L. G. Broadbent, M.D., Bamborough.
 R. L. Campbell, M.B., C.M., Newcastle.
 J. T. Reid, L.R.C.P.E., Ryhope.
 J. Murphy, B.A. (Cantab.), C.M., L.R.C.S.I., Sunderland
 Infirmary.

The SECRETARY then read the report of the Charlton Memorial Committee, as follows:—

Your Committee have to report that it met in the Library of the Newcastle Infirmary, on the 3rd October, 1874; and that,

after electing a chairman and secretary *pro tempore*, it unanimously passed the following resolutions, which the secretary was instructed to draw up in the form of a report as recommendations to the Society :—

1.—“That the names of the following gentlemen be added to the committee, viz. :—Drs. Embleton, Heath, Gibb, Gibson, T. C. Nesham, and Mr. Lightfoot (Newcastle); Drs. R. H. Wilson, Newcombe, Barkus (Gateshead); Mr. Mordey Douglas, Mr. Morgan (Sunderland); Dr. Legat (South Shields); Mr. R. N. Robson (Durham); Dr. R. Wilson (Alnwick); Dr. H. D. Ward (Blyth); Mr. S. Fielden (Shildon); Mr. Jobson, (Bishop Auckland); Drs. Fothergill and Eastwood (Darlington); Dr. Foss (Stockton).”

2.—“That the Society be recommended to invite the co-operation of the officers and of the House Committee of the Newcastle Infirmary, and of the different learned societies in Newcastle and district, viz. :—the Literary and Philosophical, the Antiquarian, and the Natural History Societies, the Tyneside Naturalist Field Club, the University of Durham, the University of Durham Colleges of Medicine and Physical Science, &c., &c.”

3.—“That it is desirable that a public meeting be held of the friends of the late Dr. Charlton, and that a deputation of this Committee be appointed to wait upon the Mayor of Newcastle, to invite him to preside at such meeting, and to appoint a day and place for holding the same.”

(Signed) S. W. BROADBENT,

Chairman of the Committee.

Dr. PHILIPSON had much pleasure in moving that the report be received and adopted.

Dr. GIBB seconded Dr. Philipson's motion.

Dr. WICKHAM asked whether this was all the Society would hear from the Committee, and whether, if the report were adopted, the future consideration of the matter would not pass out of the hands of the Society altogether.

Mr. SHIELL agreed with the Committee in thinking the town at large should be asked to co-operate. He thought the united body of subscribers should meet and express their wishes as to the form of the memorial. At the same time he thought the Society might suggest the form of the memorial. The subscribers might approve of the Society's idea, or not, as they thought fit.

Mr. MORDEY DOUGLAS thought the Society should state the form which it wished the memorial to take; the general body of the subscribers would, of course, not be bound to carry out this wish.

Dr. EMBLETON said he heartily sympathised with the movement, it was a most excellent one; he thought the Committee should form some idea as to the form of the memorial. It would be much better to give it a definite shape before going to the public; people would then join more heartily in the movement. He thought it would be best first to ask the other Societies to co-operate, and then for the conjoint Committee to determine the form of the memorial.

Dr. ARMSTRONG thought the form of the memorial should be determined by the subscribers as a whole.

Dr. GIBB explained how it was he came to take up the matter and bring it before the Society; he had not much acquaintance with getting up memorials, but he thought the first thing was to get the movement fairly started, then to call a public meeting, invite subscriptions, and determine at the public meeting the form the memorial should take.

Dr. GIBSON thought it would be unfair to the new members of the Committee to take further steps in the matter.

Dr. B. BRAMWELL said the resolutions of the Committee were simply recommendations to the Society; the recommendations might, of course, be accepted or modified as the Society thought fit.

The PRESIDENT having again read over the resolutions, the motion was put to the meeting and carried unanimously.

PREVALENT DISEASES OF THE DISTRICT.

Mr. HENRY E. ARMSTRONG presented the following :—

Return of Admissions to and Deaths at the Newcastle Fever Hospital, from March to September, 1874, inclusive.

	ADMISSIONS.								DEATHS.		
	March.	April.	May.	June.	July.	August.	September.	Total.	April.	August.	Total.
Scarlet Fever	1	2	...	2	...	1	...	6	...	...	...
Continued Fever	1	...	...	...	...	...	3	4	...	...	...
Typhus	1	...	...	...	...	1	2	4	...	...	...
Enteric Fever	1	...	...	...	1	3	3	8	...	...	...
Typho—Enteric Fever ...	...	...	2	...	...	...	...	2	...	...	...
Undeveloped Fever ... ..	...	1	...	...	...	...	...	1	1	...	...
Erysipelas	1	...	...	...	...	1	...	2	...	1	...
Catarrh	1	...	...	...	...	...	...	1	...	...	...
Mania ... ..	...	...	...	...	...	1	...	1	...	...	...
Debility ... ..	...	...	...	...	1	...	...	1	...	...	...
Jaundice ... ..	...	...	...	1	...	...	...	1	...	...	...
Syphilis ... ..	...	1	...	...	...	...	...	1	...	...	...
Totals	6	4	2	3	2	7	8	32	1	1	2

With reference to the two cases described as typho-enteric fever, Mr. Armstrong stated that they were those of a mother and son from an over-crowded and badly drained house. Each patient had petechiæ, and afterwards a crop of rose-spots, as well as presenting other symptoms of both diseases.

The case called undeveloped fever was that of a lad, aged about 14 years, sent from the Boys' Refuge. The history was—that he had run away from the refuge on May 18th, and was brought back on the 21st, and then complained of his head. He was brought to the hospital on the 22nd in a comatose state. His evening temperature on the 22nd was 104°. There was no eruption, or other sign pointing to any special disease. Next night, his temperature was 106·5°, and on the 24th he died. As he was well when he left the refuge, his illness could not have been of more,

and was perhaps less, than six days' duration. Post-mortem examination showed no lesion of brain, thoracic or abdominal viscera. The case was, therefore, classed as one of undeveloped fever.

The case of mania was that of a female, who was sent as a doubtful case, with the request from her medical attendant that she might be isolated until the disease became developed. The temperature was about 101° . There was some rambling and incoherence of speech, which soon afterwards passed into marked delusions and blasphemous talk, with violence and refusal of food, whilst the temperature declined. There being now no doubt as to the nature of the disease, she was, with the consent of her first medical attendant, removed to the asylum.

PATHOLOGICAL TRAY.

Dr. GIBB exhibited a small fibroma, about the size of an ordinary pea, which he had removed from the outer ankle of a lady, about two inches above the joint. Its structure, under the microscope, appeared to be purely fibrous. The following history of the case was given:—The lady, aged 43, is mother of eight children, and fourteen years ago, when six weeks pregnant of her third child, began to feel a burning pain above the right ankle, and accidentally discovered a hard and small pea-sized tumour under the skin at that part. She was very much distressed by the pain always coming on at night during the whole of that pregnancy, but quite lost it after her confinement. On each successive pregnancy, the pain recurred about the sixth week, and increased so much until her delivery, that on the last occasion, fourteen months ago, she had a premature confinement, and lost her child, solely, as she asserts, from the severity of the pain compelling her to walk the floor on an average four nights in the week, from about twelve at night to six o'clock in the morning. Indeed, the waters broke while she was walking about at night on the last occasion, for she was always comparatively easy when walking, and she rarely felt the pain during the day unless she was idle and at rest. She could bear no pressure on the tumour, and she explained this by saying that it lay upon a nerve. She was so nervous, that she consulted several surgeons as to the propriety of removing it, and her consent was only secured by laughing at her fears, and promising to make the operation painless, for she had again become about six weeks pregnant, and the pain had recurred. The skin was frozen by a block of ice, and the operation completed without her knowledge. Having felt no pain, she was incredulous, and on being shown the tumour, went off into so long and deep a faint fit, with an irregular and almost imperceptible pulse, that Mr. Williamson, who was assisting Dr. Gibb, had to remain with her

some time before stimulants recovered her. Miscarriage followed on the fourth day, menorrhagia and epistaxis next followed, and it is only now, two months after the operation, that she is beginning to sit up out of bed. It is the history of what could only occur in a highly nervous woman, with a heart somewhat fatty and dilated, and a fearful sensitiveness almost beyond belief.

Mr. SHIELL asked how the tumour had caused abortion.

Dr. PEART asked whether any nerve was found in connection with the tumour.

Dr. GIBB said no nerve could be seen in relation to the tumour. The abortion was not caused by the tumour, but was brought on by the want of rest and general exhaustion of the system, and the constant walking about which the patient was obliged to have recourse to.

Dr. PHILIPSON exhibited the spleen, from a case of leucoythemia. The organ was very greatly enlarged, and weighed $7\frac{1}{2}$ lbs. Microscopical examination showed the normal elements, only they were more closely packed together. The increase appeared to be owing to protiferation of the cell elements. The lymphatic glands throughout the body, both internal and peripheral, were also greatly enlarged; some of the glands were fully as large as walnuts. They were soft and pale, and on the surface were smooth and watery-looking. The cortical substance was particularly swollen, in some to the thickness of half and three-quarters of an inch. Microscopical examination showed that the enlargement was entirely due to an excessive formation of cells, nuclei and granules, similar to those of the normal glands. The patient was a man, aged 39, and had previously suffered from a prolonged attack of syphilis. The blood had been examined, the white corpuscles were greatly increased, and in comparison with the red, were in the proportion of one to four. The chief interest of the case was the association of the enlargement of the spleen, with the enlargement of the lymphatic glands. The case was, therefore, a combination of the conditions described under leucoythemia and leucœmia or lymphœmia.

Dr. B. BRAMWELL exhibited a cystic sarcoma of the breast, which he had removed, some two years ago, from a woman, 49 years of age. He said:—The history of the case, so far as I can remember it—I speak from memory, having, unfortunately, lost my notes of the case—was as follows. The patient first perceived the tumour as a hard lump, the size of a marble, close to the nipple. For the first year after its discovery it gave her no trouble; during the second year it began to be painful, and increased rapidly in size. She got so nervous and apprehensive, that she consulted several

surgeons in Shields and Newcastle; all of them, she said, with one exception, thought it was cancer; all of them advised the immediate removal of it. When I first saw the case—this was two years after its discovery—the tumour was very hard, about the size of a small hen's egg; situated close to the nipple; rather more defined, I thought, than is usually the case in scirrhus. The glands of the axilla and neck were unaffected; the patient's general health was good; she was very stout; very nervous and apprehensive about herself. The breast was removed in the usual way; there was nothing special about the operation, but on cutting into the tumour I was surprised to find it consist of a cyst, filled with clear yellow fluid, and containing a villous growth the size of a walnut. On examining this villous growth under the microscope, it was found to consist of pear-shaped villi of considerable size, the stalk of the pear and base of the villus being made up of fibrous tissue; fibre cells, with large oval nuclei; capillaries and vessels, containing granular matter and small cells. These vessels seemed to be dilated milk ducts; the villi were covered by several larger cells, small and round next the membrane forming the base of the villi, larger towards the surface. At the free surface of the villi there was a single layer of squamous epithelium. The same form of epithelium was found in a single layer lining the inner surface of the cyst. The villous growth, to the naked eye, closely resembled a villous tumour of the bladder, which I showed to the Society some four years ago. In that case, however, the villi were smaller in size, branched, and the epithelium covering the villi was a single layer of columnar cells.

Mr. HENRY E. ARMSTRONG exhibited a microscopic specimen of the bovine parasite, *strongylus filaria*, obtained at a *post mortem* examination of a heifer which had died from the disease. The exhibitor alluded to the occasional occurrence of the same parasite in the human being, and quoted Professor Gamgee, who states that in cattle it is generally met with among the young, when first turned to grass, and is often the result of over-stocking. The lungs of sheep very frequently showed evidences of the disease, which was formerly thought to be tubercular. It is now sometimes termed *phthisis pulmonalis verminalis*, and is known as bronchitis, or, popularly, as hoose. The disease in quadrupeds is said to be the same as the "gapes" of fowls.

Post mortem examination shows trachea, bronchial tubes, and the parenchyma of the lung, studded with large numbers of white, thread-like worms, of from three-quarters to two or more inches in length. The mucous membrane of the air passages is generally greatly congested. The disease has sometimes been confounded with pleuro-pneumonia, although the appearances do not resemble those of that affection.

The microscope showed the filaria to consist of a membrane, forming an elongated cavity, occupying almost the entire length of the parasite, and filled with a number of ova, each of which contains a rudimentary filaria in its interior.

Contagion is spread by means of the ova, &c., which are expectorated upon the grass and swallowed by other cattle. Although first taken into the stomach, they are said ultimately to find their way to the lungs, their proper habitat.

ON THE USE OF THE CAMERA LUCIDA TO MEDICAL AND OTHER MICROSCOPISTS.

By W. J. BARKAS, M.R.C.S.E., L.R.C.P., Lond.

THERE can be no doubt that one of the greatest stimuli to the advancement of medical science was the invention of the microscope, and I will, therefore, not waste your time by entering into any particulars as to what has been discovered by its means in pathology, medicine, &c., for you all, doubtless, are sufficiently well acquainted with that branch of medical history. Since the first microscopes were manufactured, great advances have been made in adapting other appliances to them in order to beautify the object under investigation, and to throw light upon it in different directions, such effects being produced by the parabolic reflector and the polariscope; also to enable us to project the magnified image upon a sheet of paper so that we may copy it. Other appliances have been invented and added to the microscope, but it is the last only to which I am going to direct your attention, viz., the camera lucida. There have been seven or eight varieties of camera adapted to the microscope, but only two are in common use; in one, the magnified image is reflected by means of a prism, a contrivance due to Dr. Wollaston; in the other, this is effected by an oval piece of flat glass, which may either be perfectly clear or of a bluish tint, placed at a certain angle to the rays of light proceeding from the object; this is commonly called Beales' camera. Whichever of these methods is adopted, the principle is the same, the microscope is placed horizontally, the prism or inclined glass is fitted on the eye-piece by a cap, and is so arranged that the image, after it has passed through the eye-piece, strikes upon an inclined surface and is reflected upwards at right angles, so that, on looking down through the prism or inclined glass, you perceive the image of the object lying below your eyes. In order to draw this projected image, it must fall upon a piece of white paper when it can be traced with a pencil, provided the degree of light falling upon the paper is regulated according to

the distinctness of the projected image, the darker the reflected object the less light must be allowed to illuminate the paper. All this seems very easy, but there are many more things than those I have just mentioned to take into account if you desire to draw an exact *fac-simile* of your slide. According to Beale, one would think it the easiest thing in the world to get a piece of blue glass fitted on the eye-piece, and when your slide is properly focussed, to look down and copy it, but this is a great mistake, as any of you will discover if you try it. Let us examine Beale's camera first. Fit it on the eye-piece, and then look down through the pale blue glass, and there is the image on the piece of paper. Well, so far that is all right; but we have yet to copy it, and to do so we must see our pencil point distinctly, and see it too with the same eye that is looking at the projected image, and not with the disengaged eye, for I am positive that not one in fifty of you will draw a correct copy with the free eye, aye, even after half a year's practice. We will suppose you can now see your pencil and object at the same time, the next thing to be done is to follow your pencil as it traces the object without moving your head, for the slightest movement of the head will throw your tracing wrong, and you have also never to lose sight of your pencil marks, so now you have to see your object, pencil, pencil marks, follow your pencil as it is moved, move your hand without shaking and very slowly, or you lose sight of your pencil, and, finally, your head has to be kept in one position till the drawing is finished. All this with Beale's camera, the very worst camera you could possibly use; of course, in this statement, Beale does not agree with me, but then, what inventor will agree to anything that militates against his invention. I will give you my reasons for speaking thus unfavourably of this form of camera, and for praising the prism. The first consideration in selecting a camera is, that no more light from the object shall be absorbed than can possibly be helped during its passage from the slide to the paper; whichever method is adopted the light is the same after it passes the eye-piece, so that it is in the camera itself we have to find our differences of absorption, &c. Now, with the prism, I have heard it stated there is the greatest absorption, and I have been told so by opticians who ought to know better; this statement is not true, for the light enters into a prism of clear glass, and is reflected at right angles from the opposite side and passes straight up to the eye, and, according to a law of optics, we see the image on the paper; so that there is only one reflection, and as the glass is colourless, the amount of absorption will be infinitesimal. Very little light will pass straight through the prism; also no light will be reflected by the face of the prism that the rays first strike upon, because it is placed at right angles to those rays. By means of the prism, therefore, the object is transmitted to the eye, with nearly, if not quite, the same distinctness

as when it quitted the eye-piece, and there is, therefore, very little necessity to regulate the daylight falling upon the paper. I myself always work when the sunlight is pouring into the room, and I never use any contrivance to darken my paper. All this appears somewhat complicated, but it is really very simple, the only difficulty is to arrange the prism, but when this is once done there is no more bother about it, and should you desire to alter the position of the prism, press it or raise it and it is done. We will now turn to Beale's once more, and you will find that it is inconvenient to handle, absorbs a lot of light, cannot be arranged as you wish, and gives two images. The inclined glass is loose, you perceive, to commence with, moving on the slightest provocation, and thus necessarily necessitating you to begin afresh every time it moves. Suppose it to be perfectly fast, the light strikes upon the inclined surface, and is reflected up to the eye; so far so good; but to see your paper, you have to look through blue glass, and I hardly need tell you that an object seen through coloured glass is dimmer than one seen through clear glass. That is the first objection, but you will say, why not use clear glass instead of blue; for this reason, when the light strikes the first inclined surface, only part of it reaches the eye, the remainder passes into the glass, and is reflected by the other inclined surface, so that we observe two nearly equally distinct images, one intermingled with the other to such an extent that it is impossible to copy the image at all.

Now, with the blue glass, most of the light is reflected by the first surface, but still not all of it, the rest passes in and is reflected as in the clear glass, so that we have still two images, though one is fainter than the other, but both of them are dulled by being seen through a blue glass. The reflected object is, therefore, almost invisible if bright daylight is pouring on your paper, and it is with difficulty that you see your pencil; it is, therefore, necessary to put up a screen between the daylight and your paper; directly this is done, the reflected image becomes more distinct, but never so well defined as when reflected by the prism. However, now comes the question—how are you to see your pencil at all, for the light of the projected object is not sufficient to illuminate your pencil in order to render it clearly visible to the eye, and very little daylight reaches it on account of the screen. I think you will now understand the advantage of a prism over Beale's camera, but the prism is much dearer than the other, and requires more practice in working it, as I shall show you directly; so if you want cheapness and not correctness, get Beale's, but I am certain you will very soon throw it to one side; if price is not an object, get a prism from a really good maker, and the more you use it the more you will like it. Another advantage of the prism over the flat glass is this: with the prism you can send a perfectly distinct image through it, magnified

so high as 400 diameters, but with Beales' you cannot transmit anything like 200 diameters clearly enough to be copied. Having arrived at the decision that the prism is the better camera, the next point is to use it, and this is rather difficult, because you have to look through the prism at the object, and see your pencil at the same time and with the same eye; it is done thus:—half of the pupil should look through the prism at the object, and the other half should perceive the pencil point through the empty space beyond. There can be no doubt that this is rather difficult at first, but when once you have caught the knack of it, it is done mechanically; some persons catch this knack after two or three attempts, while many never do. No other way will answer. If you look through the prism with one eye, and watch your pencil with the other, I am certain your drawings will never be correct. Having now guided you in the choice of a camera, and explained the why and wherefore of my opinions, and having shown you how to use it when it is obtained, the next thing to be done is to let you compare the two kinds personally, and this you shall do after I have finished, or at the end of the meeting. I will show you some of the drawings I have made by means of the prism from pathological, fossil, zoological, and botanical specimens. I have not drawn any by Beale's method to exhibit to you, for all that I have attempted have been failures, not resembling the object at all faithfully.

Let us now look at some of the advantages that are to be obtained by a careful and conscientious use of the camera; of course, I mean the prism camera, for I defy Beale or any one else to draw an object magnified 200 diameters by the other method correctly. All persons who study microscopical subjects ought to try and extend any knowledge they may derive from their investigations that is not known to persons whose speciality does not lie in that direction, or that is new to their co-workers. This can be done by means of papers read to a society such as this, or by the publication of papers in periodicals, &c., but whichever way is pursued, the paper will not be worth much without the exhibition of the slide or a correct drawing of it, for you will agree with me that the mere description of a microscopical object does not, as a rule, convey any distinct impression to one's mind of the object. The exhibition of the slide itself is awkward, if there are a number of persons desirous of seeing it, and even if there are only a few, a casual glance cannot impress upon one the details of the structure, &c., sufficiently well to be of any worth afterwards. Then, if the author of the paper cannot be present, and the slide be a valuable one, he will not trust it out of his hands, at least I should not; therefore, how much easier and pleasanter it would be to hand about the drawings just at the time the object was being described, and after the paper was read, they might be left in the charge of the Society, and kept in its portfolio.

In this way the Society has a correct drawing of, it may be, some abnormal pathological structure, that is exceedingly curious, and, therefore, valuable, while the author retains his slide, without running the chance of any damage accruing to it through carelessness or ignorance. Again, should the author be desirous of publishing his paper with engravings of his slide, he has merely to forward the paper and the drawings, and all trouble is at an end; but if he cannot draw it himself, he must send the slide to the editor, and it is placed in the hands of an engraver, who knows nothing about what he is looking at; and I have known them actually sketch direct from the eye-piece without the use of a camera at all. I draw all the figures myself for my papers on Fossil Teeth that are appearing in the *Monthly Review of Dental Surgery*, by means of the camera, and the engraver has merely to trace them. In order to show you how the objects are changed when drawn by an engraver ignorant of the subject, I have only to refer you to the figures of the microscopical structure of fossil teeth, given in my father's work on "Coal Measure Palæontology;" the figures, however, illustrating the teeth and jaws themselves are passably fair. Here are two illustrations, both intended to show the structure of a tooth of *Megalichthys*, one drawn by myself and the other by the lithographer. Still, holding on to my own speciality, I can point out to you frequent errors in the great work on "Fossil Fishes," by the late Professor Agassiz, the greatest palæontologist we have ever had; and I should say, from an examination of the drawings therein, that they were either done by a person ignorant of tooth structure, or that they had been drawn without the aid of a camera. Another advantage, and a very great one in my eyes is, that when a drawing has been made, one can forward it to any correspondent, and allow him thus to see what you have described to him, without risking the breakage of your slide by sending it through the post. For, although the post is a most valuable institution, the letter sorters are rather careless, and toss things about a little recklessly, and it does not take much of a shock to damage a slide irreparably. But over and above the convenience to lecturers, authors, and correspondents, it is of inestimable value to the quiet workers at the microscope; because by means of the camera, we have a very easy method of measuring the size of an object in the field, of learning to what extent one's microscope magnifies, of ascertaining that we really do see a peculiar structure when it is present, and do not imagine it, because unless it was pretty well defined, it would be rather difficult to draw it, and finally, when an object is drawn, every part comes under one's notice in detail, and nothing, therefore, is liable to be overlooked. In order to measure the size of an object, you have merely to put a micrometer upon the stage, project it on the paper, and there lie the spaces magnified, mark a space off with your

pencil, then withdraw the micrometer, and substitute the slide containing the object to be measured, mark it off on the paper in the same way, and if it agrees with the space, then whatever the size of the space is, such is the size of the object. Now, micrometers are divided into $\frac{1}{100}$ ths of an inch and $\frac{1}{1000}$ ths of an inch; therefore, if the object agrees with the magnified $\frac{1}{100}$ th of an inch space it must be $\frac{1}{100}$ th of an inch in diameter, and if it agrees with the $\frac{1}{1000}$ th of an inch, then it will be $\frac{1}{1000}$ th of an inch. It is by means of the magnified spaces of the micrometer also that we ascertain the power of the microscope. Suppose the $\frac{1}{100}$ th of an inch space when projected on the paper measured one inch, it is very clear that that space has been magnified 100 diameters; if it only measures one quarter of an inch, it has been increased 25 diameters, and so on. I have now placed before you as many of the advantages as the time at my disposal will permit, but before closing, allow me to advise you concerning two things: first, always place your microscope, when horizontal, exactly at the same height from the paper, to be drawn upon, for if it is higher or lower, your object will be larger or smaller accordingly, the reason of this I need not trouble you with, it is self-evident. I make sure about this point by always placing the microscope upon the box containing my object glasses, &c.; the second piece of advice is, always to keep the disengaged eye open, but taking care not to use it while drawing; the reason for this is, that if the eye is shut, the contracted muscles become wearied after a few minutes, and it is disagreeable work to keep the muscles forcibly contracted, not to mention the foolish appearance a person presents when his face is thus screwed up. It is rather difficult at first to keep the eye open, and not see with it, but practice makes perfect. I can assure you that, after the feat is accomplished, all microscopical work is rendered much pleasanter. I have not troubled you by entering into the details of the other varieties of the camera, for they are a little more complicated, and so far as I know, are not a bit better than Wollaston's prism. I shall be glad to show you, at the end of the meeting, the two cameras I have dwelt upon, in order that you may compare them for yourselves. These are the drawings that I have prepared, for the purpose of pointing out to you how accurately they can be done; those others are some of the drawings for my papers on Fossil Teeth, ready to be sent to the lithographer. I shall leave them on the table, in order that you may examine them at your leisure.*

* The illustrations were fac-similes of the following objects magnified from 10 to 400 diameters:—The development of the ovum of a mackerel; trichina spiralis; crystals of urea; wing of a grasshopper; section of wood; parasite of a bee; sections of the teeth of *Megalichthys Hibberti* and *Amphicentrum granulosum*.

NOTES ON THE LOCAL USE OF THE LIQUOR FERRI PERCHLORIDI FORTIOR IN CANCEROUS ULCERATION OF THE UTERUS.

BY CHARLES J. GIBB, M.D.

CANCEROUS diseases of the uterus have generally progressed so far before they came under professional observation as to pass as incurables from one medical man to another, and it thus happens that I see a large number in my consulting rooms. It is rare to find the disease so superficial and purely epithelial in character, or if interstitial, so confined to the mouth and neck of the uterus, that the diagnosis can be made with such certainty as to justify the surgeon in excising it; and in the advanced stage, the foul discharges make the case so loathsome, that in spite of the keenest feelings of pity, the surgeon is inclined to view the case as utterly hopeless, and to leave all manual treatment to the nurse. When we remember how much relief can be given to the worst symptoms of the most incurable cases of external cancers by operation or other measures calculated to remove fungoid or sloughing surfaces or masses of the disease, how pain can thus be relieved, bleedings prevented, foul discharges moderated or made less disgusting in character, it is not surprising that surgeons should strive to give similar relief to the worst cases of cancer of the womb, and be more or less successful in their efforts. From time to time I have tried the various local applications I have seen recommended; have made use of many caustics; been taught by painful experience that caustic potash, or caustic potash and lime, are unmanageable and too dangerous to the surrounding parts to use with the freedom requisite to be of service; that the actual cautery is too fear inspiring; that nitric acid, or acid nitrate of mercury, which have to be used with great care, are inefficient; and that lunar caustic, and powders or points of zinc or alum, are useless as caustics.

About two years ago, I had occasion to dilate the uterus in a very obstinate case of menorrhagia proceeding from large vascular granulations in the cavity of the enlarged organ, the strongest pharmacopeal solution of the perchloride of iron, being in fact iron dissolved in pure acid, was freely injected into the open uterine cavity, and a piece of sponge soaked in the solution left there for twenty-four hours. This treatment was perfectly successful, and I viewed with surprise the efficient way in which the soft and vascular growths were destroyed, whilst the normal structures of the uterus and vagina were but little inconvenienced, and certainly not in the least eroded. Since that time, I have been accustomed to use this

solution in many cases of cancer of the uterus, and having promised our Secretary to read a few notes at this meeting regarding its usefulness in my hands, I jotted down the histories of the following four cases, being the cases of cancer of the uterus in which I used it in my consulting rooms during the week succeeding the day I made that promise.

Case 1. Mrs. B., aged 36, a shopkeeper, married five years, no children. Was a strong powerful woman until fourteen months ago, when she was seized with menorrhagia, followed by the foul sanious discharge, and other symptoms of cancerous ulceration. She came to my offices six weeks ago, ænemic to the last degree from almost constant hæmorrhage and putrid discharge. On examination, the mouth and neck of the uterus were found destroyed, and their place occupied by a large, deep, sloughing, cancerous sore. The body of the uterus felt greatly enlarged, and as hard as a cricket ball, whilst the vagina was quite free from disease. Profuse hæmorrhage attended the examination. The sore was filled with cotton wool soaked in the solution of the perchloride, and the vagina stuffed with tow. She came from a distance by rail, and was ordered to remove it with her fingers, or allow the lady who accompanied her, to withdraw the stuffing of tow next morning, and trust to the injections of zinc and alum to wash away the cotton wool, and appropriate blood-making and aperient medicines were prescribed. On her second visit, she expressed herself as much stronger, very little bleeding having occurred during the week. The application of the perchloride was repeated, and I did not see her for the next ten days, in consequence of a severe attack of pain compelling her to remain in bed. The sore was much healthier in appearance, there had been very little bleeding, and the discharge had become scanty and semi purulent in appearance, without any of the old foul putrid smell. She was, however, very feeble, and made the journey with great difficulty. Instead of placing the cotton wool soaked in the perchloride over the sore, I elevated her breach, half filled the vagina with the solution for a couple of minutes, then sucked it up with a syringe, and left a plug of tow in the vagina to be removed next day. The improvement was marked on her fourth visit, and on this, her sixth, I found there had only been a little bleeding once during the week, whilst forcing away a very costive motion. The ulcer was perceptibly smaller and free from slough, the circumference of the vagina around it having contracted considerably. A small quantity of yellow oil-like pus lay in the vagina, but the examination still caused the ulcer to bleed slightly. The ulcer was again bathed with the strong perchloride, and she returned home expressing herself twice as strong as when she first called upon me, and very much relieved from the local misery.

Case 2.—Mrs. R., aged 36, an innkeeper, with several children, the last seven years old, commenced to have menorrhagia and the ordinary symptoms of cancer of the womb, nearly a year ago. Began to attend my offices four months ago. Was found to have a large soft bleeding epithelioma covering the swollen and apparently destroyed vaginal part of the uterus, and extending along the front wall of the vagina, to within an inch-and-a-half of the orifice of the urethra. She came in a cab, and her linen was drenched with blood. She was excessively ænemic from daily hæmorrhage, and was evidently in the last stage of the disease, the sore bleeding on the least examination. A large piece of cotton wool was soaked in the perchloride, placed over the disease, and the vagina stuffed with tow. On her second visit, a week afterwards, the hæmorrhage had almost ceased, the sanious putrid discharge was much lessened, and although there was but little change to be seen in the appearance of the sore, the finger felt it to be less fungoid and pultaceous in consistence, and less blood followed the examination. I may here remark that the bleeding fungoid sore was so extensive as to make it utterly impossible to use any speculum, and the oiled fingers of myself and assistant had to be used to open the vagina and make the necessary examinations and applications. The same examination was made weekly during the nine succeeding visits, by which time she had regained much of her lost strength, walking a considerable distance to my rooms and experiencing but little pain or inconvenience except in passing her urine and fœces. The hæmorrhage had ceased after the third application, the foul sanious discharge had given place to a scanty oil-like purulent matter, without smell, the fungoid vaginal sore was healed, or rather converted into a thick nodulated gristly cicatricial substance covered with a thin smooth membrane, whilst the deepest part, that corresponding to the uterus, alone presented a chink-like ulcerated surface. It was difficult to see or to reach the deepest part, on account of the remarkable contraction that had taken place in the calibre of the vagina, which, from being very capacious and soft, admitting several fingers, had become changed to a rigid tube that would scarcely allow more than one finger to pass along the upper part of the canal. At this period, some of her children became ill of fever, and she did not visit me for six weeks, having gone through much fatigue in the nursing of them. On examining her this week, on her return, I found she was again suffering from a recurrence of the hæmorrhage, consequent, as she asserted, upon the menstrual flow, and I also found the disease had again opened out the deepest part of the cicatrix and formed an irregular foul ulcer, nearly the size of a crown piece. The front part of the cicatrix remained in much the same condition. I covered the sore with wool soaked in the perchloride, and warned her against such negligent attendance in future.

Case 3.—Mrs. B., aged 46, a stout healthy-looking lady, from the country, the mother of several children, called upon me about a year ago, having slight discharge and bleedings in the intervals between her monthly periods, as well as excessive monthly flow. Her other symptoms were so slight, that her husband, who was also a patient, had difficulty in persuading her to see me. The mouth and neck of the uterus were found red and raw looking, bleeding on the slightest touch, also hard and considerably enlarged, and there was an ulcerated crack at the orifice of the organ. She attended my rooms about once a-week for two months. Lunar caustic was applied at first, but producing little change, the perchloride was used for a few times with such good effect, that considering herself quite well, she did not return to see me until to-day, when she tells me the bleedings have returned lately, and she feels a heavy uncomfortable weight in the uterine region. On examination, the whole organ is found greatly enlarged and very hard, being evidently infiltrated with scirrhus disease. The old ulcer is again open, bleeds freely on examination, and there is considerable discharge. The perchloride was applied.

Case 4.—Mrs. F., aged 69, from the sea coast, consulted me about eight years ago for a discharge, occasional menorrhagia, and the uncomfortable bearing down and other symptoms indicative of uterine mischief. The uterus was found atrophied, and the os and neck almost destroyed by a chronic canceroid ulcer, in appearance like to lupus; the whole case reminding me strongly of a similar condition of the breast, which I have often seen in old people to continue in a chronic state for years. Potassa fusa, and other caustics and injections, were used for more than a year, the result being the total destruction of the vaginal part of the uterus and the formation of a deep sulcus there, which, after remaining healed for some months, again opened out, and has ever since compelled her to attend my rooms two or three times a year for a month or two together. A slight bloody discharge is the only symptom that now tells her that the cicatrix has given way, and of this discharge she has the greatest dread. Lunar caustic or nitric acid, with the use of injections, were generally successful after a time in healing the sore, or rather crack, in the cicatrix. I am now, however, accustomed to fill the wound with a small piece of wool dipped in the perchloride, and retaining it there for the first day by a plug of tow in the vagina, find it frequently, in spite of the use of injections, to stick in its place until her next visit, a week afterwards, when I remove it. I find the perchloride to be by far the most effectual means of healing the scar when it cracks and bleeds, and on this occasion I make the usual application.

In reviewing the above cases, I have to remark, that since the first case was committed to paper, she has visited me twice, and

on each occasion has reported large losses of blood, although on examination the sore looks clean, and the discharge remains a thick, brownish pus, quite devoid of smell. What remains of the uterus is infiltrated with cancer, and although the treatment has greatly relieved the most distressing symptoms, it is evident that a fatal termination cannot be long delayed. Indeed, I have seen that where the form of cancer is hard, and embraces the whole of the uterus, the destruction of the enlarged organ often takes place by a rapid disintegration, attended with alarming gushes of blood, and all that can be done only lengthens the downward path, and makes it less foul and painful.

It is different with that class of cases of which the second is a good example. Here there was as pure an epithelioma as is met with in the uterus, spreading over the adjoining surfaces of the vagina, and not infiltrating or running deeply into their structures, but throwing out surfacewards exuberant vascular fungoid granulations, quickly renewed as the older parts sloughed away. Into this soft albumenoid structure the acid solution of iron sinks, destroys, and disinfects, and, strong as it is, only hardens and tans, but does not in the least destroy the healthy mucus membrane of the vagina. A few applications of the cotton wool soaked in the solution suffice to clear away the greater part of the diseased growth, reparative efforts are then made by the comparatively healthy structures underneath, and the further applications appear to hasten cicatrization, as well as eradicate the remains of the disease. In one case, very similar to the second case, the lady has now been quite well for some months, and the resulting cicatrix, when she ceased to attend upon me, had so narrowed the upper third of the vagina, that the finger could not pass along it, and was so thick, hard, and tuberculated, that I could not resist coming to the conclusion, that, in the process of cure, a large amount of albuminoid matter had been exuded into and become solidified in the structures surrounding the disease. Whether this thickening and solidification of the cicatrix and immediately adjoining parts, is what naturally takes place in this region when epithelial cancer is destroyed by other caustics, I have no experience to know; possibly, it may partially result from the action of the solution, left for so long a time on the highly vascular structures supporting the diseased growth—structures that have been so long accustomed to throw into the diseased mass the large supply of albumenoid food necessary for its support. In another case of apparent cure, where the epithelial disease was confined to the uterine structure, I did not observe this condition of the cicatrix, and it may be that the presence of so much connective tissue in the vaginal wall is the cause, as well as the seat, of this peculiar formation, reminding me, as it does, of a bad case of keloid growth on the skin, or the hard, irregular cicatrix of a bad burn.

The course of cancer in the womb is sometimes so rapid, from the quick disorganization and sloughing of the uterus, and the sufferings of the patient so great, that it is impossible, in a dispensary practice like mine, to see such cases as often as necessary, and to follow them out satisfactorily, or to persuade a sensitive woman to have repeated applications of an agent which does not give immediate or permanent relief. In such cases, indeed, no remedies can be of much avail; it is where the disease is purely epithelial, or chronic and rodent in character, and confined to the surface, that the treatment I have described does most good, and, as I have said, appears sometimes to cure even bad cases.

The application of the perchloride rarely causes pain. On four or five occasions, a patient on arriving home has been confined to bed for a few days, and in one of the successful cases for upwards of a fortnight, in consequence of severe colic-like pain in the region of the uterus, lower abdomen, and back. I am inclined to think that the wool had been over saturated in the perchloride in such cases, as it has occasionally happened that the solution has flowed from the vagina over the vulva after the patient has left my offices, and these parts been blistered and painfully excoriated as a consequence. On this account, I am now very careful to wash away with a syringe all discharges from the surface of the cancer, to raise the breach of the patient to prevent any overflow of the solution over the vulva; and after applying the perchloride, to suck up with a sponge from out of the bottom of the vagina any superabundant solution which a slight pressure on the saturated wool over the sore may cause to flow out; after that, to retain the wool in its place by a loose plug of tow in the vagina, and, lastly, dry and oil the vulva before the patient rises from the couch.

I have always used the strongest pharmacopeal solution undiluted, as I have only used it to secure a caustic action. At first, I applied it on pieces of sponge or lint, but finally found cotton wool to answer best, as it sucks up any quantity that may be required, parts with it easily, and can be moulded into any form, so as to fill a cavity, or cover over and adhere to any growth. It has happened occasionally, that I have found the cotton wool still adherent over the sore a week or more after its application, and when removed it is always a black or chocolate-coloured mass, frequently quite solid from the quantity of blood or albuminous matter absorbed into its meshes, and clotted therein; indeed, one patient gravely told me she had passed a solid brown egg a few days after one of her visits, no doubt it was the hardened wool, although she declared she had cleared out the vagina the day after her visit.

I have kept no record of the cases I have treated with the perchloride, but as I have generally had six or eight under treatment at one time, I must have used it in twenty or thirty cases, and its

beneficial influence has been so marked, that I would strongly recommend its trial in suitable cases.

Dr. GIBSON said that the subject of the excellent paper which had just been read was peculiarly interesting to himself; although the treatment recommended was not new nor was it the best or the most constantly applicable to cases such as reported. Neither was it altogether free from danger, inasmuch as it was often difficult to prevent some portion of this perchloride from passing into the cavity of the uterus. Often it produced the excessive suffering, spasmodic or cramp-like, to which Dr. Gibb had referred. The drug was most manageable when used as a glycerine of the perchloride. But in any form it will generally be found inferior to pernitrate of mercury and to carbolic acid. Dr. Gibson noticed another, but somewhat allied form of disease, for which the solution of the perchloride was employed by himself, with remarkable success—a villous or fungoid disease of the internal surface of the body of the uterus. In these cases the perchloride was almost a specific. But here also there was considerable risk in the employment of the remedy, and in all these forms of disease special provision was required to protect the patient from injury.

Dr. GOWANS thought the Society should be greatly obliged to Dr. Gibb for his practical and valuable paper. The use of the perchloride of iron had been strongly advocated by the late Sir J. Y. Simpson. In one case in which that distinguished man applied it, a case of epithelioma of the os uteri, the patient was completely cured after three or four applications, and remained quite well for many years. Dr. Gowans had used it himself in several cases with most beneficial results. The form he used was the solution in glycerine. Dr. Gowans thought with Dr. Gibson, that the injection of strong perchloride solution into the cavity of the uterus was dangerous, but that was not the mode of application recommended by Dr. Gibb. Dr. Gibb's method was the local application of the perchloride on a piece of cotton wool. Another way of applying it was on a brush, using the speculum. Dr. Gowans thought Dr. Gibb deserved the thanks of the Society.

Dr. GIBSON said Sir J. Y. Simpson, before his death, ceased to regard the application of the perchloride as favourable.

Dr. GIBB, in reply, said the mode in which he used the perchloride was very different from the injection of it into the uterine cavity. In one case he had used it in that way, but in that case the cavity of the organ and the os were widely dilated. The case was a very obstinate one, which had resisted many varieties of treatment. Under ordinary circumstances he would not think of injecting it into the cavity of the uterus. He found in his practice the strong

solution of the perchloride very manageable, and followed with very much better results than other caustics. He found that it produced very little, if any, injury to the healthy structures in the neighbourhood of the disease. He had never seen the bad results which Dr. Gibson described. His experience differed, therefore, entirely from that of Dr. Gibson.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

THE second monthly meeting of the Society was held in the Library of the Infirmary, on Thursday, November 12th, 1874, Mr. Broadbent, President, in the chair.

The following gentlemen were elected members of the Society :—

T. G. Beatson, B.A. (Cantab.), M.B., C.M. (Edin.),
Newcastle Infirmary.
S. Bernard, M.D. (Canada), L.R.C.P. (Lond.), Silksworth.
L. G. Broadbent, M.D., Bamborough.
R. L. Campbell, M.B., C.M., Newcastle.
J. T. Reid, L.R.C.P.E., Ryhope.
J. Murphy, B.A. (Cantab.), C.M., L.R.C.S.I., Sunderland
Infirmary.

The following gentlemen were proposed for election :—

Robert T. Beamish, M.D. (Dublin), Blanchland.
James Rawlings, M.R.C.S., Hartlepool.
John T. Clarke, M.R.C.S., Felling.
Alexander Frazer, M.B., C.M. (Glasgow), Ponteland.
Thomas A. Dodd, M.R.C.S., Newcastle.
James McGregor MacLagan, M.D., Riding Mill.
John Spear, M.R.C.S., South Shields.

PREVALENT DISEASES OF THE DISTRICT.

Mr. HENRY E. ARMSTRONG presented the following

*Return of Admissions to and Deaths at the Newcastle Fever Hospital, during
October, 1874.*

	ADMISSIONS.	DEATHS.
Erysipelas	1	1
Enteric Fever	9	1
Typhus	7	3
Smallpox (confluent, vaccinated)	1	...
Total	18	5

The case of Erysipelas was sent from Tyne Dock, and died four days after admission.

One case of Typhus died from apoplexy during convalescence. Four cases of Typhus came from one house; all were severe, and two were fatal. One case of Typhus (in a lad of 17) was complicated with double Pneumonia. He has recovered, and was discharged, almost well, on the twenty-sixth day.

One case of Enteric Fever in a man, was caught unmistakably from his daughter, who had been sent from her situation suffering from Enteric Fever. The mother took ill during the daughter's convalescence, and died; the father next suffered, and was sent to Hospital. On the eleventh day, several unusually distinct rose-spots were noted. The case was complicated with general bronchitis and a good deal of delirium. The patient is now convalescent.

Another case of Enteric Fever (severe) was remarkable for the copiousness of the rose-spots, which appeared first on the eleventh day, and were extremely numerous by the fourteenth. The case, even till the tenth day, resembled one of commencing Typhus.—The speaker stated that he had obtained from the Sanitary Authority limited discretionary power to remove to Hospital cases of contagious Fever without waiting for the usual guarantee for maintenance.

Dr. YELD alluded to Professor Tyndall's letter on Typhoid Fever, which had recently appeared in the *Times*, and called attention to the prevalence of that disease, to a greater or less extent, in all the large towns in the neighbourhood. He stated that several deaths from this disease had occurred in Sunderland during the past few months, in which town the ventilation of the sewers had been carried out according to the recommendation of Mr. Hansen, C.E., of the Local Government Board, so that the outbreak of the disease could scarcely be ascribed to the escape of gas from the sewers, unless it was from house sewers which were imperfect, and over the laying of which the Sanitary Authority had no control. The condition of water-closets is most important. With reference to this cause, he stated, "That in water-closets which have been any length of time in use, a considerable quantity of foetid organic matter becomes adherent to the outside of the basin and metal pan, which is not affected by the flushing or disinfection of the closet, the result being that each time the closet is flushed the gas generated by such deposit, and which is very noxious, escapes into the room, and is calculated to produce disease in those exposed to its influence." Dr. Yeld further stated that the deposit on one of the basins which he had examined was covered with a fungoid growth, or some very low form of vegetable life, and threw it out as a suggestion worthy of consideration whether the germs of

Typhoid Fever might not thus be developed, and so pass into the atmosphere, and produce disease.

Mr. GOWANS said he was extremely glad that the subject of the origin of Enteric Fever had been brought before the notice of the Society. It was of vital importance to know whether the disease can originate *de novo* or not. Dr. Budd and Professor Tyndall say no. Dr. Murchison holds a contrary opinion; he says it can arise *de novo* from the decomposition of fœcal matter. He thought it would be a very excellent subject for a paper; and if Mr. Armstrong would write a paper and give his views and the result of his experience, he had no doubt there would be a good discussion. He would like to ask Mr. Armstrong whether the case in which there was such a copious eruption was a severe case or not. Most authorities state that there is no relation between the severity of the eruption and the gravity of the case. In Typhus, on the other hand, it is well known that the more copious the eruption the more severe the case.

Dr. EMBLETON said he would like to know whether Mr. Armstrong thought Typhoid and Enteric Fever the same disease. From the remarks Mr. Armstrong had made, he was led to believe that he did not. He would like to ask Dr. Yeld, who had evidently devoted much time and attention to this matter, what was the nature of the organism described—did it simply consist of films, or had it any fructification, or spores, which we know are so easily distributed? Dr. Embleton thought that Professor Tyndall had brought forward Dr. Budd's work as evidence that something more than sewer gas was necessary to produce Typhoid, and that sewer gases were simply the nidus and vehicle of the poison. Dr. Embleton stated that after Dr. Budd had declared his belief in something more than sewer gas, organisms had been discovered which were thought to be the poison. It would be interesting to compare Dr. Yeld's observations with these, and to see if the organisms were the same. It is a common notion amongst the general public that cesspools, dung-heaps, etc., cannot of themselves produce Typhoid. Dr. Embleton knew of many villages in which the smell from cesspools, dung-hills, etc., was always most offensive, and yet these places were free from Typhoid. If, however, excrement from a case of Typhoid were added, then you would have an outbreak of the disease. Dr. Embleton agreed with Professor Tyndall in thinking there must be something more than the mere decomposition of fœcal matter.

Dr. FOSS said Dr. Embleton had condemned cesspools, middens, etc., but in some cases, as in those localities where there was no stream or river, they were absolutely necessary. Mr. Armstrong, in his remarks, had stated that in one case the disease was unmis-

takably communicated by contagion; he had not, however, given any facts to prove that conclusion. It was quite possible that the two cases might have originated from some common cause. Dr. Foss believed that in the majority of cases the poison was introduced by the alimentary canal, and not through the lungs. It was often possible to trace a direct communication between some drain and water used for drinking purposes. In fact, in many cases, people got the disease by drinking water thus impregnated.

Dr. DENHAM said that at the Birmingham meeting of the British Medical Association, Dr. Fergus had exhibited some soil pipes, the upper surface of which was completely eroded. In this way, Dr. Fergus had stated, that many persons were in all probability poisoned by the emanations of sewer gases. In this way he accounted for the large amount of Typhoid in Edinburgh and Glasgow, which places were supplied with good water. Dr. Denham further stated that he failed to recognise the distinction between Typhoid and Typhus. He thought the two were modifications of one and the same disease—the continued fever of Cullen.

Dr. EMBLETON said cesspools were in some cases, of course, necessary, but they ought to be used as seldom as possible, and ought frequently to be cleansed by a strong disinfectant, such as carbolic acid.

Dr. ARMSTRONG said he had lately found it necessary to look over the drains of his house. Nothing was found wrong with the drains, but the plumber had recommended him to renew the soil pipe, between the water-closet and the drain, for he said it was sure to be covered with a white coat which gave off a very bad smell. The soil pipe was removed, found to be eroded, and covered with a white deposit which was evidently a vegetable organism.

Dr. GIBB said he had at present under his care a young foreigner, who had come to his rooms five or six days in succession with very severe diarrhoea. This gentleman could not be persuaded to take to his bed, but on the tenth or eleventh day he had to give in. The case was a severe one; there was no rash. On the eleventh day a poultice was applied to the abdomen, a copious rash then appeared, and with the appearance of the rash there was a subsidence of all the severe symptoms.

Mr. ARMSTRONG said he was sorry if he had led any member of the Society to think that he considered Typhoid and Enteric Fever distinct diseases. He thought the former term a bad one, but he found he must use it, as the general public did not know what was meant by the term Enteric. In his notes he always used the term Enteric—never Typhoid. He said he would be most happy to read a paper on the subject, and lay his views before the Society.

Dr. YELD said he fully intended to prosecute his investigations, and if he was able, he would bring specimens to the next meeting of the Society, and would then go more minutely into the matter.

Mr. MORDEY DOUGLAS said he was somewhat surprised to hear Dr. Dennam state that he failed to recognise a distinction between Typhus and Typhoid. For his own part, he strongly believed in the non-identity of the two diseases. Even before the appearance of the eruption it was often possible to tell from the general appearance of the patient whether it would turn out to be Typhus or Typhoid. Sir William Jenner, in working out this subject, had traced two hundred cases, and he always found other cases in the houses from which these cases were sent. In no single case, however, did he find a Typhus case in a house from which a Typhoid case had been sent, and *vice versa*. This Mr. Douglas thought an irresistible proof that Typhus did not produce Typhoid, nor Typhoid Typhus. One great means of preventing Typhoid was to keep the drains clear. Ventilation of the drains was also most important, and ought to be effected by shafts carried into the chimneys of large works, and not by open grates in the streets, such as are seen in Sunderland.

PATHOLOGICAL TRAY.

Dr. BYROM BRAMWELL showed the thoracic viscera of a man æt. 45, who had died from primary intra-thoracic tumour. The patient was admitted into the Newcastle Infirmary six weeks before his death. The physical signs and symptoms closely resembled those of aneurism, but after several careful examinations of the case, Dr. Bramwell came to the conclusion that the symptoms were caused by a solid intra-thoracic tumour, and not by an aneurism. Dr. Bramwell stated that he intended to read a paper upon the case, which was a most interesting one. He had shown the specimen that evening in order that it might be compared with the other specimen of intra-thoracic tumour which was the subject of his paper.

CASE OF TUMOUR ON THE BASE OF THE SKULL, PRESSING ON THE PONS VAROLII, MEDULLA OBLONGATA AND CEREBELLUM.

By D. EMBLETON, M.D.

A married man, æt. 45, of robust frame, and great energy of mind and body, fully engaged in several kinds of business, incapable of fatigue, and of indomitable will, about three years before his death began unaccountably to have headaches and prostration of strength from time to time, at first slight and lasting a few hours, afterwards more oppressive, and at last so severe as to confine him helpless to bed.

He consulted me a few months after these attacks began; I advised cessation from work, rest in the country, and gave him bromide of potassium, and aperients, and ordered strict regulation of diet. He had been overtasking his brain, without knowing it, and hoped by his strong will to shake off the disorder.

Owing in part to the exigencies of his business, which depended mainly on his own personal exertions, he only partially adopted the advice given, suffering much pain in the head at times, mitigated by the bromide and cold applications; in the intervals of relief, which soon became shorter, he applied himself with his customary energy to his work.

About a year after his first visit he returned, complaining bitterly of the cephalalgia which threatened to put a stop to his business, as it recurred when he applied his mind to his affairs.

He now shortened his work, and went to pass the evenings, nights, and mornings by the seaside, in relaxation. The intervals of freedom from pain became longer, but the attacks still returned with unabated intensity, and now accompanied with diplopia, and yet he could not dispense with work. During the summer of 1873, abstaining from business, he improved greatly; when one day, incautiously driving in an open vehicle too far under a broiling sun, he got so severe an attack of pain that he could not avoid crying out aloud. He was visited at Cullercoats by Mr. E. W. Forster.

The pain was generally felt at the top, but also at the back and front of the head; diplopia was distressing, and he was feverish; he seemed to have had a kind of sunstroke. By degrees, and in a few days, pain subsided.

Vision became normal when the pain was gone, but during the pain it was always double; an object was seen double horizontally, but sometimes vertically; the double objects were at times quite apart, at times overlapping each other more or less. The right pupil was observed to be rather larger than the left.

During the paroxysms of pain he was irritable and impatient, but always preserved his consciousness, and could even give directions about business.

During the autumn, there was much pain, but in the intervals he felt quite well, his appetite was good, but his strength less. When the pain was present he always laid in bed on his back, the head resting on the occiput; if he turned his head to one side he had vertigo, which obliged him frequently to keep his eyes fixed on some spot on the wall opposite, and this seemed to steady him. When the pain abated he could turn on one side and fall asleep. He complained at different times of a feeling in the head of gradually increasing pressure, which went on until it became all but intolerable, and then, to use his own expression, a safety valve opened on one side or the other, and the compression abated by "a blowing off of the steam," with much noise in the head and ears. The pressure began mostly on the right and middle, and the blowing off on the left side of the head. At times he had feelings of his passing off rapidly into space.

The recurrence of the pain was irregular as to time and unaccountable. He felt a difficulty in starting to speak. When the head was well, he could eat and sleep well, gained flesh and strength, and could bear to have his head more elevated in bed. No paralysis of the limbs existed, nor any discoverable disease in chest or abdomen.

The treatment up to November was varied, bromide of potassium and of ammonium and chloral hydrate often gave relief, but were obliged to be left off, owing to the depression they produced. Hypophosphites, phosphorus, quinia, iron, strychnia, digitalis, liq. opii sedativus, belladonna internally and to the head, hyoscyamus, purgatives and enemata, acids, alkalies, cold to head, narcotic liniments, croton oil liniment, blisters to head and nape, were exhibited as occasion seemed to demand.

During November, he often felt very low, desponding, and weary, lying constantly on his back, having much pain and occasional vomiting or constipation, and some cough. The pulse ranged from 66 to 86, urine free from sugar or albumen—normal.

In the first week of November, he was visited by Sir Geo. Burrows, Bart., M.D., who suggested a palliative and supporting treatment.

In the first half of December, pulse varied from 72 to 80, once only reaching 100, swallowing began to be difficult, and tenacious white mucus was troublesome in the throat, had much and persistent pain, felt cold frequently, and was losing flesh.

Quinia, and then tincture of cinchona, with ammonia and æther, and later, half drachm doses of carbonate of iron, were given; each seemed for a few days to do good, but could not longer be borne.

December 25th.—Increased dysphagia and mucus in throat, strength declining, yet still he persisted in exclaiming that if he could only get up and stir about, he could shake off all his ailments; but on raising him up gradually in bed, severe vertigo supervened, his pulse fell perceptibly in strength, he was alarmed and distressed, and had to be immediately let down again.

On the 28th.—Much debility, towards evening slight convulsions occurred, which soon ceased. He had desire for food, and the bowels were very freely moved; however, he had much difficulty in swallowing, his speech became more imperfect, his sight dim, and he had much pain in the head.

There was reason to conclude that the disease, whatever it might be, was causing increasing paralysis of the par vagum.

On the 31st.—During the afternoon, he had sat up in bed, which he had not done for several weeks, and with much effort had taken food, some of it occasionally regurgitating, and he was much plagued with mucus and coughing. The same state is well known to exist in animals that have suffered section of one of the pneumogastric nerves. His intellect was entire, but his speech became more imperfect; he could not utter the words that he wished to speak. About 5 p.m., occurred, for a few minutes, slight convulsions of the body and limbs, after which he was found to be speechless, quite paralysed on the right side, with immoveable pupils, and complete insensibility, with paralysis of left side also, speedily followed. A profuse sweat broke out over the whole body, with quickening of the pulse and increase of temperature. The breathing was laboured, interrupted with mucous rattle in the throat, and it gradually fell in force and frequency, ending finally by a few gasps about 9 o'clock. A fluttering action of the heart was maintained for fully an hour later.

The patient had long had a strange presentiment, recurring occasionally, that he would not live to see the new year, though at other times he believed in his recovery.

On exposing the brain on the 2nd of January, 1874, both cerebrum and cerebellum were found to be extremely red and vascular, over both hemispheres of each alike, and on cutting into them, bloody points were very numerous; the walls of the ventricles were also very vascular, and contained a small quantity of serum.

No disease, no hæmorrhage, was visible throughout the substance of the brain. On removing it, however, a tumour was discovered attached to the sella turcica, white, smooth, tense, and composed of two lobes connected by a narrow neck, which corresponded to the posterior clinoid processes of the sphenoid; the posterior and larger lobe, stretching backwards along the basilar process, was removed with the brain, after the connection with the anterior lobe had been divided; it was pear-shaped, the larger end being about the size of

a large walnut. It was found to have been pressing on the under surface of the pons, inclining to the left side, then upon the left side of the medulla oblongata, and the adjacent part of the left lobe of the cerebellum, to which last it had contracted adhesion. On breaking up the adhesion, several small spots—effusions—of blood were observed on the surface of the cerebellum, also on the opposed surface of the tumour, and similar spots were found on incising the soft interior of the latter.

The part of the cerebellum adherent to the tumour was visibly softened and pulpy, and for a little space around it there was softening and much vascularity. The left side of the medulla oblongata had suffered much compression and was softened, and the strands of origin of the glosso-pharyngeal and pneumogastric nerves of that side, were breaking down, being very soft, and two or three had already given way. The parts which had lain upon the tumour were deeply indented by it.

On examining the anterior part of the tumour, which had been left in situ, it was found swelling up from the sella turcica and backward between the posterior clinoid processes of the sphenoid. The pituitary gland had disappeared, and on scooping out the soft interior of the mass after its fibrous covering had been cut through, the body of the sphenoid was discovered to be extensively carious.

It was inferred at the post-mortem examination that the tumour had commenced either in the pituitary body, or in the cellular tissue around it, and during its growth had caused absorption of that body, distension of the dura mater covering it, and inflammation and caries of the bone beneath, and this would be the cause of severe pain; as its growth proceeded, the tumour had forced its way backwards between the clinoid processes, carrying with it a coating of the dura mater, causing many paroxysms of pain; at this part was the constriction already mentioned, and the pressure there must have been extreme, for on incising the dura mater in front of that part, the lips of the incision gaped wide at once, and the tumour below bulged upwards. When the tumour had reached the pons, its presence and increasing size would cause pressure not only on the pons but on all the parts above it, as the optic tracts and thalami and corpora quadrigemina, &c., and moreover the circulation through the brain would become deranged, thus vertigo and diplopia might arise.

Lastly, when the left side of the medulla oblongata became subject to pressure, and the origin of the filaments of the glosso-pharyngeal and pneumogastric nerves were similarly affected, the functions of deglutition and respiration would suffer more and more, and as those filaments became softened and divided, these functions would gradually become impaired and finally cease, and death be the result.

The right hemiplegia was perhaps the consequence of the softening of the left side of the cerebellum and of the medulla oblongata.

The growth of the tumour may have been uniform, and the giving way of the opposing parts irregular or intermittent, and the times of greatest pressure may have corresponded to the paroxysms of pain suffered by the patient.

The diagnosis, until within a few weeks of death, was necessarily obscure, but the symptoms after that plainly indicated that some disease was invading the base of the brain, and notably the mesocephalon and the medulla oblongata.

The prognosis from the beginning was grave.

The treatment was of necessity palliative and supporting only, and, as such, it was only partially successful.

The examination was interesting and instructive, revealing as it did lesions which would account for most of the pathological phenomena and their progress during life. The nature of the disease could only be guessed at, and there was no family history to throw light on it. Last of all comes the question, was the long overworking of the brain the cause of this disease? To this I do not feel myself competent to give a satisfactory answer.

The interior of the tumour was very soft, so that a section of it could not be made; the slides exhibited under the microscope show the substance to be encephaloid, much broken up, and mixed with very numerous melanotic pigment grains, mostly separate, but some in aggregated round masses of cell form but apparently without a wall, and occasional small oil globules.

POSTSCRIPT.

The impairment and final loss of the power of articulation may be accounted for by the pressure of the tumour on the filaments of the ninth nerve, the motor of the tongue. This pressure, considering the situation of the filaments, must have existed, though in the account of the autopsy it is not noticed.

Since the reading of this paper, I have met with in "Müller's Physiology," by Baly, vol. 1, p. 707, a case so similar in several particulars that I trust I am not taking too great a liberty in adding a transcript of it as a postscript. It is as follows:—

"This nerve (the ninth) supplies the motor influence for the motions of the tongue in deglutition and articulation. A case related by Montault, at the Academy of Medicine at Paris, is illustrative. The symptoms were spasm and tremor of the muscles of the neck; pain on the left side of the head and neck, and difficulty of articulation, with gradual wasting of the tongue, which, when protruded from the mouth, was drawn towards the left side. The left side of the tongue was most wasted, but taste was perfect on both sides. At a later period there were difficult deglutition,

aphonia, and other symptoms. After death, a hydatid cyst was found in the left occipital fossa, which raised the left lobe of the cerebellum and pushed the medulla oblongata to the right side, extended a few lines into the spinal canal, and was imbedded in the anterior condyloid foramen, while a prolongation from its base passed through the anterior part of the foramen lacerum posterius. From the point of their exit from the cranium, the left hypoglossal and glosso-pharyngeal nerves were atrophied; the vagus and spinal accessory were not affected."

Dr. NEWCOMBE asked whether any ophthalmoscopic examination had been made of the case.

Dr. GIBSON asked whether there was any history of syphilis.

Dr. EASTWOOD said the symptoms were very like those of a case he had brought before the notice of this Society some years ago. In that case there was a cancerous tumour at the base of the brain. Dr. Eastwood had had several other cases; in some the symptoms were attributable to the tumour, in others to the cancerous nature of the case.

ON THE EARLY DIAGNOSIS OF GENERAL PARALYSIS OF THE INSANE.

By J. W. EASTWOOD, M.D., Edin., M.R.C.P. Lond., Dinsdale Park.

More than six years ago, I brought the subject of general paralysis before the members of this Society, and, therefore, at the present time I only propose to consider the history and early diagnosis of this disease. It is one of the most interesting, and yet one of the most fatal diseases that comes under the notice of the psychological physician. To many general practitioners it is very imperfectly known, or it is not known at all, unless they have had special opportunities of acquiring a knowledge of its symptoms. I do not say this from the least desire to cast a slur upon the knowledge of the great bulk of medical men, for I have known physicians and surgeons of great eminence and experience fail to recognise it. There seems to be several reasons for this want of acquaintance with a disease, which, instead of being uncommon, is really one of the most frequent causes of death, if not the most frequent cause, in our large asylums for the insane. Last year, in the asylum for the North Riding of York, out of 34 deaths, there were, from general paralysis, ten males and three females. In the West Riding Asylum, out of 142 deaths, twenty-three males and three females. In the Durham County Asylum, where general

paralysis is met with very frequently, there were twenty-seven males and ten females from this cause, out of 123 deaths. In the Cumberland and Westmorland Asylum, there were six males and four females out of 43 deaths. In the Newcastle Asylum, in one year, though not the last one, there were thirteen males died from this disease, out of 32 deaths. I have no recent returns from the Northumberland Asylum, but in agricultural districts, though this disease and phthisis carry off by far the largest portion of the insane, yet it is not so common as where there are larger centres of population. These facts will show you that it is not a *rare* disease which I am wishing to bring under your notice. One cause of the present ignorance of this formidable malady is, that it is not very many years since it was recognised as a distinct disease. Even at the present time our text-books treat of it as a form only of paralysis, or as a form of insanity, whereas it has a separate and distinct entity. Another cause is, that the early symptoms alone come under the notice of the general physician or general practitioner, and the symptoms of paralysis being generally less apparent than those of a disturbed mental condition, the patient is sent from home before the medical attendant has been able to recognise the complaint. This affection has also been neglected by authors of works on the practice of medicine, and in Dr. Aitken's large work of two volumes, the subject is dismissed in four lines, under the head of "progressive paralysis of the insane," whilst locomotor ataxy, a much more uncommon disease, occupies nearly a page.

For the earliest accounts of general paralysis, we are chiefly indebted to French authors, and the first notice is to be found in a work of M. Bayle's, which appeared in 1822, but the first *distinct* treatise was published by M. Delaye in 1822, entitled, "Some considerations on a kind of Paralysis which particularly affects the Insane." After that, both M.M. Bayle and Calmeil wrote ably on the subject, and in 1847, Professor Rodrigues wrote a work called, "Treatise on Chronic General Paralysis, considered specially amongst the Insane." In 1848, my friend, Dr. Winn, of Harley Street, London, published a review of M. Rodrigues' work in the *Psychological Journal*, and it was from this monograph, the first, I believe, which appeared in this country, that I first learnt the symptoms of this formidable disease. It was not, however, until the year 1860 that I distinctly recognised general paralysis in practice. Since that time every year has served to increase my familiarity with this malady, the cases of which have all a common likeness, yet differing in some particulars. There is no other form of paralysis which is really like it, and there is no other form of insanity which can be confounded with it, when once any one has become acquainted with its characteristic symptoms.

There are several ways in which general paralysis first manifests

itself, but I shall only trouble you with the two leading kinds of cases, in their early symptoms. To attempt to give you a complete history of the complaint, would be beyond the limits of this paper.

One way in which the early symptoms show themselves, is in the occurrence of a slight affection of the speech, and peculiar tremulousness of the lips and tongue. There is a difficulty in pronouncing hard words, and a thickness of speech, much resembling that of a drunken man, depending upon a want of consentaneous action of the muscles. This symptom may be considered characteristic of the disease, for other symptoms may be absent, when there is only this affection of speech. This goes on, with or without a mental change taking place, for some time, though there is often some loss of memory, and an inaptitude for business, until the walking is affected, and the patient's gait is very much like that of a drunken man. He is shaky, and weak in the legs. There is plenty of force, when it is exercised, but the force is unequal in character, and irregular. If you see these symptoms, suspect general paralysis. After a time, the mind becomes feebler, or excitement comes on, which partakes of the sanguine character. Everything is *couleur de rose*, the gardens are all fine, the houses are all large, the patient himself is very wealthy, and sees valuable pictures where there are only common ones, has a taste perhaps for jewellery, and thinks nothing of ordering £1,000 worth at a time. Perhaps he begins buying, and spends his money right and left on comparatively useless objects. In one instance which I knew, the patient squandered away £10,000 in a short time. These symptoms continue, until at length the friends of the patient are alarmed, and it is then thought necessary to place him under confinement. Very frequently this state of exaltation of the mental faculties continues for some time without any one noticing it, whilst the paralysis may be entirely overlooked. The medical attendant, if he has taken a serious view of the case, generally speaks of it as being softening of the brain, but fails to realise its formidable character at the commencement.

The second principal form in which the symptoms manifest themselves, is one which more frequently perhaps than the other, is likely to mislead the ordinary medical attendant. It appears to begin suddenly by an attack of acute mania, and as the patient becomes violent and unmanageable at home, he is hurried off to a public or private asylum, and in some measure lost sight of for a time. The friends and medical attendants, or those who have signed the certificates, expect the patient to recover soon, as acute cases often do, and are surprised when they are informed that the disease is not ordinary mania, but a fatal one, which may partially recover for a time, but which ultimately ends in dementia and death, in perhaps two years. As the last case of this kind was quite a typical one, I will describe it briefly.

I was written to about a patient, who was described to me as having been drinking, and as he had not been bad more than a week, it was expected he would soon recover. I got no further particulars about him until I received him into my house. I found him a strong, hearty looking man, well built, of ruddy countenance, and of great strength for his size. He had never ailed anything in his life, and was now, according to his own statement, quite well, but his nerves were shaken, not with delirium tremens, but with brain fever. At first it was difficult to perceive any affection of the speech, and it required nice examination to ascertain any impairment of the muscles, but the mental symptoms were highly characteristic. Being a builder, and a successful one, he had branched off amongst telegraphs, and he was going to supply them in such a manner, and so inexpensively, that every house in the kingdom would be supplied with them. He had come here to look at some property, and wished either to buy this house, or sink for coal. He would propose most extraordinary plans, and was entirely confident in himself that he could carry them out. He knew a good deal of the medical profession, and he could soon qualify himself as a doctor. Returning to the building schemes he had in view, he said it was necessary to be all right about title deeds and other matters, but he was a match for the lawyers, and he knew as much as they did. He was also an engineer, and was intending to build some iron ships on a new principle, by which a large fortune would be made. And thus he rattled on, talking on any subject in this exalted manner, perfectly well, quite happy in his way, but presently forgetting what he had said a few minutes before. At once I looked upon the case as one of general paralysis, and wrote to his friends for more information, stating that I did not consider his present condition had been brought on solely by drinking, though that had made him worse, but that it must have been coming on for some time past. My own opinion was, that instead of a week, the origin was more probably three or four months since. I then learnt that he had been neglecting his business, was irregular in his habits, occasionally forgetful; had had a slight epileptic attack, and had begun to go to shops, spending money profusely. I stated that the patient was not likely to be well in a short time, but that if the acute excitement passed off, it would probably leave his mind enfeebled, and fit for very little business again. It was painful to his friends to hear this, and painful to me to have to mention it, but the seriousness of the disease not having been recognised by the experienced practitioners who signed the certificates, it became my duty to point it out. It was necessary for me to say that, though the patient might recover temporarily from the excitement, yet that he would ultimately become broken down in mind and body, until death terminated the closing stage of dementia. For this reason alone it

is important that you should be able early to diagnose this really well-marked form of disease. The patient became more and more excited, was violent and aggressive, noisy and destructive, with the speech and walking distinctly impaired, and full of delusions of the same grand character. After a few weeks, he has become calmer; can behave himself well; and were the case one of simple acute mania, I should write to his friends, and say that he was recovering, and that it was only a question of time when he would be able to resume his duties. As it is, there is literally no hope. It is doubtful if any patient permanently recovers. I have never seen one. On several occasions patients have left my care, almost well, but the tongue obstinately refused to do its duty properly, though the bodily strength had been regained, after the acute excitement. They have gone home, only to return and die.

This disease attacks the healthy and the robust, those who are using their faculties vigorously, especially successful men of business, who have used all the powers of mind and body actively. It is also frequent in military men. There are many more men than women attacked; indeed, in private practice, I have never seen a female general paralytic. The disease is certainly fatal, or nearly so, and I have never seen a patient recover permanently. Those who are discharged as recovered are attacked again after any serious exciting cause. From thirty to fifty years of age is the most frequent period of life for the disease to show itself. Calmeil had never seen it earlier than thirty-two, but quite recently I saw a young woman in the Durham County Asylum aged twenty-one, in the last stage of general paralysis.

It is most important to diagnose this affection early, as the patient may thereby be saved from many exciting causes, such as worry of business and intemperance, and it is absolutely necessary that he should be removed from home and all anxieties, before the excitement comes on, which almost irrecoverably breaks down the nervous tissue.

The end of these patients is a state of dementia, lasting for one or two years, seldom more; and the ordinary medical attendant rarely sees the rapid decline of his patient towards dementia and death. At this stage, such patients can be distinguished chiefly from other demented cases by the speech, so long as any power of it is left. Death occurs by a slow paralysis, or more rapidly owing to some internal congestion.

This disease teaches a lesson to the vigorous man, to whom his greatest danger is his excessive good health. He should preserve, and not abuse, his active mental and physical powers.

I hope this rough sketch of this formidable disease will cause you to take such an interest in it, in future, that you will have little difficulty in recognising it, and if you do so, the object of this paper

will be attained. But one case carefully observed will be of more value to you than the description which I have given.

Dr. LEGAT said he had listened with great pleasure to Dr. Eastwood's paper. It vividly recalled to his memory a case which showed that cases of this sort are not always overlooked by general practitioners, and that they are sometimes not recognised by experts. He was called to London to see a gentleman who was staying at the Great Northern Hotel, a man of 56 years of age, who had always been very temperate. The people in the hotel were in a state of great excitement, for they saw that the patient was insane. He had been spending right and left, going in for all sorts of extravagances which he was unable to afford. Dr. Legat at once saw that he was wrong in his mind, and he came to the conclusion that the case was one of general paralysis. Dr. Tuke who saw the case with Dr. Legat, agreed in the diagnosis, and pointed out the difficulty, or rather hesitation of speech, and another symptom, viz., irregular contraction of the iris. There was also the tremor which Dr. Eastwood had referred to. The patient was sent to an asylum in Northumberland; the Superintendent failed to recognise the nature of the disease. The patient died suddenly after playing a game of billiards. Dr. Howden, of Montrose, under whose care he was at the time of his death, found the grey matter of the brain in a state of degeneration.

NOTES ON A CASE OF INTRA-THORACIC TUMOUR (LYMPHO SARCOMA), WITH SECONDARY DEPOSIT IN SUPRA-RENAL CAPSULE.

By BYROM BRAMWELL, M.B.

William Jones, æt. 30, labourer, was admitted into the Tyne-mouth Union Workhouse on the 28th October, 1872, complaining of shortness of breath on the least exertion, cough, great emaciation, and debility.

Previous History.—Patient states that, seven years ago, he had three or four small chancres, which healed up in a few days, and were not followed by any other symptoms: with this exception, he did not know what a day's illness was until January of the present year. He was at that time blasting rock in a tunnel in the midland counties; the tunnel was a wet, draughty place, often full of gunpowder smoke; he caught cold, began to cough and spit; the expectoration was white and frothy, at times thick and yellow; he several times brought up a few mouthfuls of bright red blood; the cough and spit gradually got worse; he rapidly lost flesh, and in the middle of April was obliged to give up work. He thinks the inhalation of the gunpowder smoke made him much worse. After leaving this work, he came to Shields, where he has been working off and on as a labourer until five weeks ago. For the last five weeks he has been confined to bed.

Present Condition.—The patient's general appearance at first sight would lead one to suppose that he is suffering from renal dropsy, his face is puffed and swollen, especially about the eyelids. On more careful examination, it is seen that, instead of the characteristic pallor of Bright's disease, the face has somewhat of a dusky hue; the neck, too, is swollen, more especially on the right side just above the clavicle; (the patient states that for some weeks he has noticed that his neck was thicker than it used to be, and that he had a tight feeling up the right side of the neck and face.) The slightest exertion makes him feel, he says, "wonderful short of breath;" he has a frequent short, hard, cough; the expectoration is scanty, consisting chiefly of saliva, his voice is husky, he speaks in a whisper. For the last week he has been obliged to lie on his left side; when he lies on his right side, he feels a pain between the superior internal angle of the right scapula and the spine, he feels this pain constantly, but when he lies on his left side, it is bearable; until he felt this pain he used always, he says, to lie on his right side. Patient is extremely emaciated, he is a big-boned man and used to be very stout and muscular. The right pupil is considerably larger than the left.

Respiratory System.—*On Inspection*, the upper part of the thorax anteriorly is seen to be swollen, the clavicles do not stand out, there is slight pitting on pressure over the swollen part. Several large veins are seen coursing over this part of the chest, the right brachio-cephalic vein is distended and stands prominently out. Minute superficial venous congestion is seen over the precordial region, and over various parts, both of the front and back of the chest, very marked over the vertebra prominens. The left side of the chest does not expand even on a full inspiration, the movement of the right side is normal. The left side at the level of the nipple, measures, during expiration, fully an inch more than the right.

On Palpation.—Vocal fremitus is felt increased in both infra-clavicular regions, especially in the left, no vocal fremitus can be perceived over the lower part of the left chest.

On Percussion.—There is dulness anteriorly over the whole of the left chest; the dulness is absolute from an inch below the left clavicle to the superior border of the 9th rib; below this, a high tympanitic note from the stomach is obtained. Transversely, the absolute dulness extends on the one side as far as the right border of the sternum, on the other over the lateral region of the chest. Posteriorly, there is absolute dulness over the lower two-thirds of the left lung, over the upper one-third the percussion note is much impaired, the resonance being greatest in the supra-scapular region and close to the spine,—together with the dulness, there is a feeling of great resistance. On the right side anteriorly, there is absolute dulness over a space the size of an egg about the second right costal cartilage; there is impaired percussion from the right border of the sternum to within two inches of the right nipple, most marked in the infraclavicular region. The liver dulness extends as high up as the inferior border of the sixth rib; anteriorly and laterally the percussion note is hyper-resonant; posteriorly there is dulness over the right base (hepatic); between the superior internal angle of the scapula and the spine the percussion note is impaired. Over the rest of the right side posteriorly, the resonance is normal, if anything, hyper-resonant.

On Auscultation.—There is intense tubular breathing and increased vocal resonance over the left side of the chest, anteriorly as far down as the nipple, below this point the respiratory murmur and vocal resonance are only faintly heard. Posteriorly, in the supra-scapular and the spinal regions there is tubular breathing and increased vocal resonance. Over the lower half of the lateral and posterior parts of the left chest no respiratory sound is heard. Vocal resonance can, however, be faintly heard over these parts. On the right side there is increased vocal resonance and tubular breathing in the infraclavicular region; over the rest of the right chest anteriorly, laterally, and posteriorly (except quite at the base) the respiratory murmur is puerile.

The respirations when at rest number 18 in the minute. The slightest movement, as turning over in bed, makes the patient feel very short of breath, and brings on the cough.

Circulatory System.—The position of the apex beat cannot be made out; there is marked pulsation both to sight and touch in the pit of the epigastrium. A dull, heaving pulsation can be felt over the middle and lower sternal and left mammary regions, the pulsation is best felt when firm pressure is made with the flat hand. At the second right costal cartilage there is well marked pulsation to be felt, it is more distinct, and apparently not so deep seated as the pulsation over the sternal region.

The position of the heart cannot be defined by percussion.

On Auscultation.—The heart sounds are heard loudly all over the front of the chest, most clearly over the lower half of the sternum and adjacent part of the right mammary region and at the second right costal cartilage. The sounds are at these points superficial and quite normal in character. Over the area of absolute dulness in the left mammary region the heart sounds are shorter, sharper, and harsher than elsewhere. Posteriorly over the whole of the left side and over the upper one-third of the right side the heart sounds are distinctly heard.

Radial pulse 108, soft and weak, the right being very much weaker than the left.

Digestive System.—Abdomen natural on inspection; hepatic dulness increased, the absolute dulness measures five inches, extending upwards as high as the inferior border of the sixth rib. A tympanitic note from the stomach is obtained over an extensive area. Tongue moist, slightly coated with a brown fir. Appetite poor; says he has great difficulty in swallowing solids, the food seems to stick half way down, chokes him, and causes him to make a grimace. He cannot swallow liquids freely, as they make him cough. The bowels are constipated.

Genito Urinary System.—*Urine.*—Sp. gr. 1026, dark amber coloured, acid, slight deposit of urates. No albumen.

Nervous System.—Sleeps badly, often dreams, and frequently wakes in a fright.

Integumentary System.—Skin smooth and moist, cool to touch, temp. ax. 99·3. There is great wasting of all the voluntary muscles and total absence of fat.

Family History, good. His father died at 76, from old age and rheumatism; his mother died at 69, from old age. He had seven brothers and sisters; five are alive, and so far as he knows, well; of the remaining two, one was drowned, the other died at 28, of what, he does not know. He does not think that any of his relatives have died of consumption.

The *Treatment* consisted in the administration of—

1st. Plenty of good nourishing food, milk, beef tea, eggs.

2nd. Two ounces of wine and a pint of ale daily.

3rd. Seven grains of iodide of potassium in an ounce of infusion of gentian three times a day.

4th. An opiate when the pain was severe.

SUBSEQUENT HISTORY OF THE CASE.

Oct. 31.—Had a very bad night, could not sleep because of a pain across the back of his neck, says he several times woke thinking that his neck was broken. Had great difficulty in swallowing a spoonful of porridge this morning. He complains of tenderness on pressure over the sixth, seventh, and eighth left ribs in the line of the axilla. On auscultation over the tender spot, a friction sound can be heard on full inspiration. The pupils are, to-day equal. Radial pulse, 108. Respirations, 20.

Nov. 2.—Very bad night, woke several times thinking he was being strangled. The face and neck are more swollen. Says he feels very weak, can hardly get in and out of bed. Friction is now heard on full inspiration over the whole of the lower half of the left chest anteriorly, laterally, and posteriorly. Below the right clavicle a soft systolic murmur is faintly heard, no second sound can be perceived here. At the second right costal cartilage both heart sounds are heard free from murmur. Radial pulse, 114. Respirations, 22.

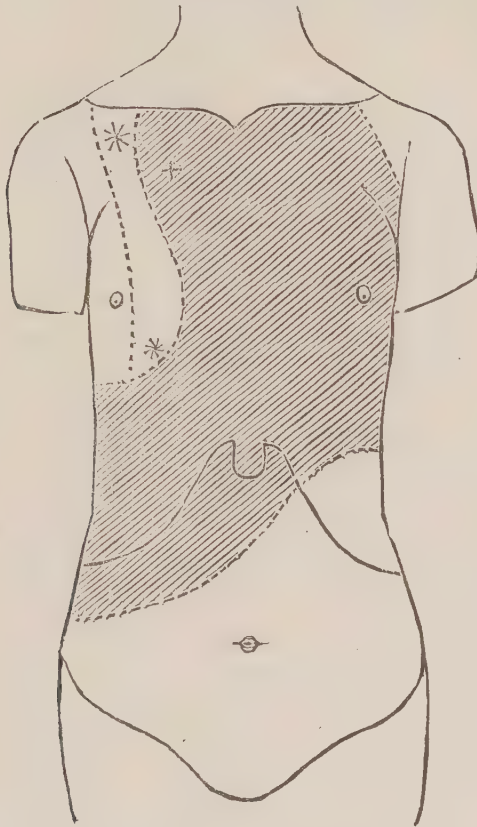
Nov. 5.—General condition unchanged, has spat a little blood, complains of great pain between the right scapula and spine. Says his swallowing is worse. The right pupil is one-third larger than the left. The systolic murmur under the right clavicle is loud to-day; it can be heard over the right side anteriorly as far down as the nipple, also in the left infraclavicular region, in the vessels of the neck, very distinctly over the painful spot between the right scapula and the spine, and, for a considerable distance, down each side of the spinal column; no second sound can be heard accompanying the murmur. At the second right costal cartilage the murmur can be distinctly heard, but here the second sound is audible. Over the supra-scapular, and left mammary regions, both heart sounds are heard free from murmur. Radial pulse, 110. Respirations, 23.

Nov. 8.—Rather easier. Swelling of the face not so great. At the root of the neck on each side, small nodules about the size of peas can be distinctly felt, the venous congestion on the right side is less. There is now absolute dulness over the whole of the left side of the chest. No friction sound is heard. He complains of pain over the region of the liver, increased by pressure. The hepatic dulness now measures six inches. Appetite better. Swallowing very bad, tongue clean.

Nov. 18.—Has continued better and worse since previous date, feels his breathing shorter, swelling of face and neck greater. The

absolute dulness on percussion now extends to within two inches of the right nipple. The percussion note is impaired as far as the nipple. [See Figs. I. and II.] Right radial pulse imperceptible.

FIG. I.



EXPLANATION OF DIAGRAM.

FIG. I.—Front of thorax and abdomen. The dark shading shows the extent of absolute dulness at an advanced stage of the case: the percussion note was impaired as far as the dotted line. The liver dulness is represented.

× Indicates the position of most marked aortic pulsation.

* The position of systolic murmur first heard.

* The position of systolic murmur last heard.

Urine.—Light straw coloured, acid, sp. gr. 1018, no deposit—no albumen.

Nov. 25.—Superficial œdema of front of chest much greater. Glandular enlargement at the root of the neck more distinct. Some œdema seen over the left side posteriorly, the hollow between the left scapula and the spine is effaced, and the scapula looks as if it were pushed backwards by the swelling. Breathing very much worse; is most anxious to have something done. My friend, Dr. Page, saw the case with me, and agreed in thinking it advisable to puncture the left chest; this was done between the seventh and eighth ribs; more than a pint of thick matter was withdrawn (the matter would not flow through the aspirator, a full-size trochar was therefore

introduced). A probe passed through the wound was felt to come in contact with a solid body. On microscopic examination the matter drawn off was seen to consist of pus and blood mixed with much granular debris. To have four ounces of whisky and a mixture containing iron and quinine.

FIG. II.



EXPLANATION OF DIAGRAM.

FIG. II.—Back view. (The shading ought to extend more into the right supra-scapular region.)

× Indicates the position of pain as described in the text.

Nov. 26.—Had a bad night. Suffered a good deal of pain in the wound, has an anxious, pinched expression, face and hands are bathed in a cold clammy perspiration, very thirsty, has been much troubled with a short dry cough, says his breathing is as bad as it was before the operation. Over the top of the left chest anteriorly and posteriorly there is a high tympanitic note on percussion, but no vesicular murmur. The liver dulness is increased to $6\frac{1}{2}$ inches. The area of splenic dulness also seems enlarged. Radial pulse, 20. Respirations, 36. To be stimulated freely.

Nov. 27.—Has rallied, and feels better. Radial pulse, 109. Respirations, 30.

Nov. 30.—General condition unchanged. The swelling over the front of the chest is greater. The left arm is swollen at the elbow.

Dec. 4.—Very bad to-day. Has spat up a quantity of thick, white creamy-looking matter, which, under the microscope, is seen to consist of squamous epithelium cells and small corpuscular bodies rounded in form, granular, about the size of human red blood corpuscles, on the addition of acetic acid not resembling pus corpuscles.

In addition to the systolic murmur below the right clavicle, another murmur is now heard, at a point two inches to the lower and inner side of the right nipple. This murmur is only heard over a very limited area, is systolic and very harsh in character. The dull heaving pulsation is very distinct over the lower sternal and right mammary regions. The apex beat is felt very distinctly to the right of the Zyphoid cartilage. Radial pulse, 107. Respirations, 30.

Dec. 7.—The systolic murmur under the right clavicle is much less distinct. The other murmur is very loud, but the area over which it is heard is still very circumscribed. Over the front of the left chest the heart sounds are heard free from murmur.

Dec. 9.—Face, neck, and upper part of the chest more swollen. Physical signs the same.

Dec. 14.—Is dying. The nurse says he has been stuffing his hands into his mouth, and pulling at his throat as if he wanted to tear something away.

Post-mortem Examination.—The post-mortem was made 26 hours after death. The body was much emaciated, the face was slightly swollen, the base of the neck was much swollen, especially on the right side, the swelling presented in parts the same nodular feel that it had for some time previous to death.

On opening the thorax, a solid mass the size of a small child's head, (apparently from its colour the consolidated left lung) stood prominently out in the left mammary region; above and to the right of this, and situated immediately over the ascending portion of the arch of the aorta, was another solid mass the size of a large orange, of a pinkish white colour. The upper lobe of the right lung was in contact with and overlapped somewhat the smaller nodule. The heart and pericardium were pushed to the right side of the middle line, and were partly covered by the right lung. The left lung and adjacent portion of the parietal-pleura and pericardium were coated with recent lymph. Over the apex of the lung the lymph was in layers of a flesh-like consistence, and fully half an inch thick. Over the lower and posterior aspect of the lung the same appearances were seen. There was some foetid pus in the lower part of the left pleural cavity. The right lung was attached by old adhesions of some length to the anterior wall of the chest.

The thoracic-viscera, together with the trachea, œsophagus, and great vessels of the neck, were removed *en masse*. [See Figs. III. and IV.] The tumour was found to consist of enlarged bronchial

glands. It was made up of two great masses. The smaller, situated in the upper part of the chest, chiefly to the right of the middle line, completely surrounded the aortic arch and great vessels, and was closely adherent to these structures. This portion of the tumour was in contact, in front, with the upper lobe of the

FIG. III.

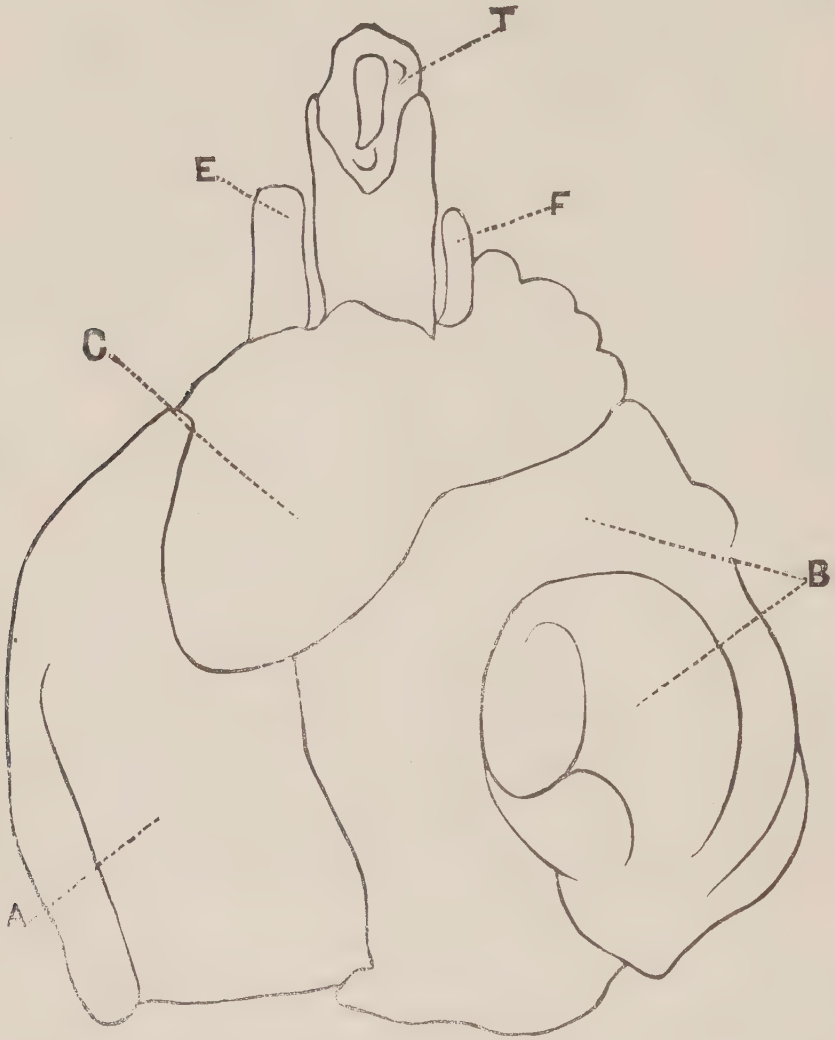


FIG. III.—Semi-diagrammatic view of the thoracic viscera from the front, showing the relative positions of the various parts.

- A. The right lung. B. The left lung. C. Portion of tumour.
 E. Right internal jugular vein, which was distended with a dense old coagulum.
 F. Left internal jugular vein. T. The trachea.
 G. The descending thoracic aorta.

left lung, and that portion of the anterior wall of the chest corresponding to the upper sternal and right infraclavicular regions; behind, with the posterior wall of the chest; on the right side, with the upper lobe of the right lung; on the left, with the larger mass

of tumour, and with the upper lobe of the left lung; below, it was bounded by the reflected edge of the pericardium; above, it had made its way along the course of the great vessels into the neck.

The superior vena-cava, and the veins forming it, were embedded in the substance of the tumour; the right internal jugular vein was blocked up by a dense old coagulum. The lower portion of the tumour, situated chiefly to the left of the middle line, was in contact, in front, with the anterior wall of the chest from the clavicle above to the ninth rib below; (the left lung formed a thin expansion over this portion of the tumour:) behind with the left lung, the aorta, cesophagus, spinal column, and a small

FIG. IV.

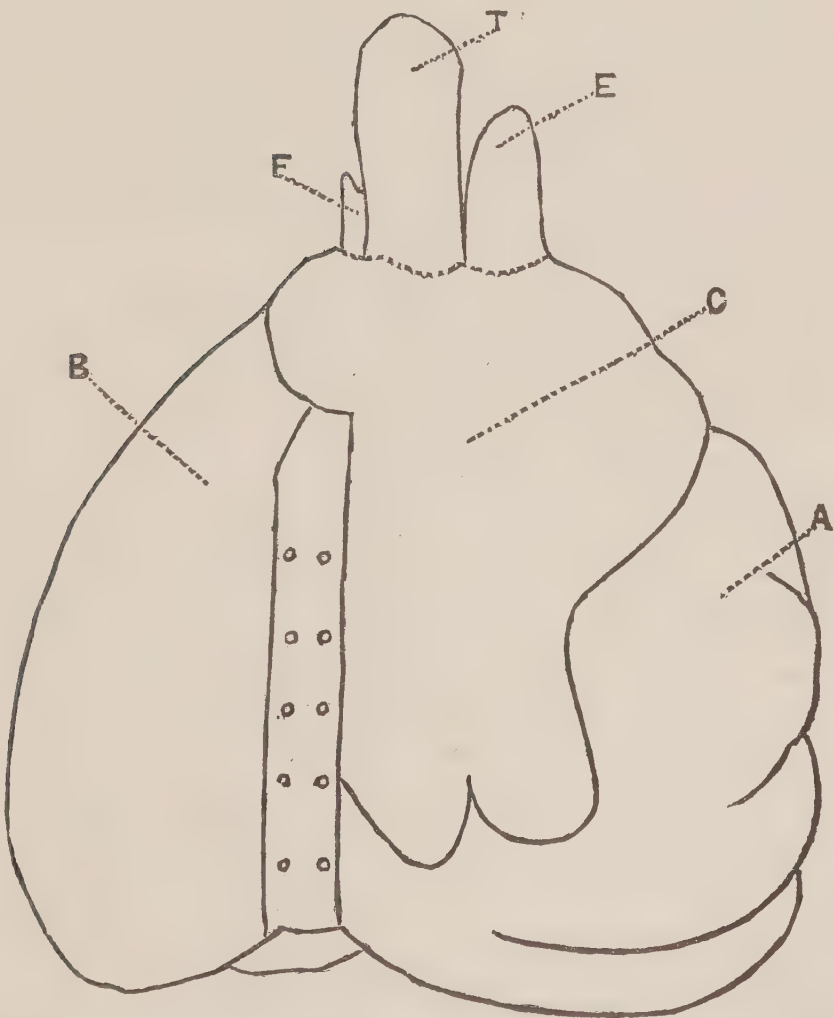


FIG. IV.—Semi-diagrammatic view of thoracic viscera from behind.

For explanation of letters see Fig. III.

N.B.—These figures were drawn from the preparation after its removal from the body. The viscera were suspended by a string tied to the trachea.

portion of the posterior wall of the right chest; (the tumour had here moulded itself exactly to the form of the various hard structures with which it had come in contact:) on the left with the left lung and through it with the lateral wall of the chest: on the right with the upper tumour mass and with the heart. The portion of tumour in contact with the heart was made up of many small nodules closely packed together.

The upper lobe of the left lung formed a thin expansion over the tumour (about a quarter of an inch thick), the lower lobe was solidified, infiltrated with corpuscles of the same form and size as the corpuscles composing the tumour. The bronchial tubes were much enlarged and filled with thick yellow matter. The right lung was congested, especially at its base, but otherwise healthy.

On opening the pericardium, the heart was seen to be small and kidney-shaped in form. The right border of the heart formed the convexity, the junction of the left auricle and ventricle the concavity of the kidney. The under surface of the heart was pressed upon by the nodular portion of tumour already described. One nodule had inserted itself between the root of the aorta and the superior vena cava at its junction with the right auricle. The left ventricle was much atrophied. The heart, as a whole, had been pressed forward and to the right.

Several large glands were found in the neck, and some on the left side beneath the sternocleido-mastoid muscle.

Abdomen.—The liver was much enlarged, congested, and rather fatty.

The spleen was somewhat enlarged.

The left supra-renal capsule was the size of a large orange, of a pinkish white colour, nodular on the surface, and of a brain-like consistence. The supra-renal vein was distended with the same matter which formed the tumour, and was at least the size of the renal vein, and joined that vessel.

On microscopic examination, the structure of this mass was found to be the same as that of the thoracic tumour.

The right supra-renal capsule was considerably enlarged, but natural in structure.

Both kidneys were enlarged, pale, somewhat fatty; the right kidney contained a large cyst.

A gland the size of a large walnut was found attached to the pyloric end of the stomach.

The other abdominal viscera were healthy.

The brain and spinal cord were not examined.

On section, the tumour was of a delicate pink colour. In parts, it was of a brain-like consistence, in others firmer. A white milky juice exuded from it on section.

MICROSCOPIC EXAMINATION OF THE TUMOUR.

On microscopic examination, the tumour was found to consist of a corpuscular and a fibrous element. The corpuscles, in size rather less than a human red blood corpuscle ($\frac{1}{3000}$ to $\frac{1}{4000}$ of an inch), were of a granular appearance, some of them contained bright refractive points. Their form was, for the most part, round. Some, when isolated, were seen to be surrounded with fine granular matter which was prolonged into two delicate fibres, making the corpuscle resemble a delicate fibre cell. The fibrous element consisted of blood vessels, delicate fibres, and connective tissue. The fibres were for the most part arranged in bundles. [See Fig. V.]

FIG. V.



FIG. V.—Microscopic Section of thoracic tumour pencilled out, the corpuscles have been mostly washed away.

The corpuscles adhered thickly to the surface of the blood vessels and connective tissue; the delicate process of a corpuscle was in several instances seen to be continuous with the delicate fibre of a bundle. Masses of corpuscles were also seen lying between the bundles of fibres. Bundles of fibres and corpuscles often diverged, as it were, from a common base; at their junction there was generally a mass of corpuscles. In places, the corpuscles were grouped together in strings with fibrous tissue intervening.

REMARKS.

The diagnostic points of this case were most interesting. When first seen, the patient's general appearance was that of renal dropsy, but the state of the urine, the venous engorgement, and the physical signs derived from the examination of the chest, showed that obstruction to the venous circulation at the root of the neck

was the cause of the œdema. What then was the nature of this obstruction? Was it due to a solid tumour or an aneurism complicated with copious effusion into the left pleural cavity, the left lung being compressed upwards and adherent to the upper part of the anterior wall of the chest? Either would explain the physical signs and symptoms.

The points in favour of a solid growth were:—

1. The early history of the case, viz., the hæmoptysis cough, and progressive emaciation.

2. The absolute character and great extent of the dulness, the presence of tubular breathing and increased vocal resonance, and the absence of all moist sounds in the left infraclavicular region.

3. The extensive area over which the heart sounds could be heard.

4. The extreme state of emaciation, which was anterior to the dysphagia.

5. The great venous engorgement and superficial œdema, though sometimes seen in aneurism were much in favour of a solid growth. Stokes in his great work on "Diseases of the Heart and Aorta" lays great stress upon the so-called "tippet-like" swelling at the base of the neck, as a diagnostic of intra-thoracic tumour; he states that this form of swelling is more characteristic of cancer than of aneurism.

6. The absence of any erosion of the thoracic walls.

The physical signs in favour of aneurism, complicated with copious pleuritic effusion and adhesion of the left lung to the upper and anterior wall of the chest, were—

1. The dulness on percussion, and well-marked pulsation over the aortic area (the second right costal cartilage), and the superficial character of the heart sounds over this dull region.

2. The dulness on percussion, absence of respiration, vocal resonance and fremitus over the lower half of the left chest.

3. The great displacement of the heart.

4. The much greater frequency of aneurism than of solid growth.

5. The constant pain between the superior angle of the right scapula and spine was in favour of aneurism. We seldom see cancerous tumours causing such severe pain by pressure.

The pressure signs—viz., the difference in the strength of the radials, the difference in the size of the pupils, the character of the cough, and altered character of the voice, and the dysphagia, were equally in favour of aneurism or tumour.

The absence of murmur (I am now speaking of the case as first seen) was rather in favour of aneurism than of tumour, many of the best authorities stating that in aneurisms of the thoracic aorta, uncomplicated by cardiac valvular lesion, murmur is more often absent than present. Stokes, speaking of the differential diagnosis

of intra-thoracic cancer and of aneurism, says, "If we suppose a case in which the evidences on both sides were equally balanced, the existence of a soft single systolic bellows-murmur should incline our opinion towards cancer: bellows-murmur in aneurisms of the arch is a more rare circumstance than has been supposed." The character of the murmur, when it did appear, was in favour of a solid growth; the murmur was single, systolic, of long duration, and *not followed by the second sound*.

Taking all the physical signs into consideration, the balance of evidence, when first seen, was to my mind in favour of solid tumour, complicated with copious effusion into the left pleural cavity.

The subsequent progress of the case, the increased œdema at the root of the neck, the gradual progressive displacement of the heart, the appearance of the infraclavicular systolic murmur, the obliteration of the right radial pulse, the appearance of a friction sound over the lower half of the left chest, and finally the glandular enlargement at the root of the neck, proved conclusively the presence of a solid tumour within the thorax.

The appearance of the pleural friction sound over the inferior half of the left chest showed, that, the dulness on percussion was not owing to copious effusion. The feeling of a solid tumour by the probe when the chest was punctured confirmed the diagnosis of a solid growth.

THE NATURE OF THE TUMOUR.

To the naked eye it exactly resembled encephaloid cancer; on microscopical examination, however, it was found to be a lymphosarcoma, that is, it was made up of the same elements which we find in the normal lymphatic gland, small corpuscles, blood vessels, and delicate fibrous tissue: the corpuscles were much in excess, and gave to the tumour the soft fluctuating feel which it had in parts. The greater part of the tumour evidently consisted of enlarged bronchial glands. The nodule over the aorta corresponded in position to the remains of the thymus gland, an organ which is very frequently the seat of these growths.

The large size of the tumour is noteworthy. Its position in the thorax, and its relations to the various structures, fully explains the symptoms and physical signs seen during life. It is somewhat remarkable that when at rest there was little or no increase in the frequency of the respirations; the slightest exertion, however, made the patient very short of breath.

The condition of the left supra-renal capsule was a remarkable feature of the case, and tends to show the close physiological relation which these organs have to the lymphatic glandular system.

The absence of pigmentation of the skin proves that all forms of disease of the supra-renal capsules are not necessarily attended with bronzing. The case mentioned by Sir William Jenner at a recent

meeting of the Pathological Society of London, in which there was pigmentation, the capsules being healthy, but the solar plexus injured by a mass of enlarged glands, confirms the opinion of Quekett that the discoloration of the skin depends upon modifications in the solar plexus, and that the frequent occurrence of disease of the capsules with bronzing is accounted for by modifications induced in the solar plexus through the numerous filaments which supply these organs.

The early history of the case favours the idea that the disease originated in the thorax, and suggests the supposition that the enlargement of the bronchial glands was due to irritation, the result of inhalation of gunpowder smoke.

NORTHUMBERLAND AND DURHAM
MEDICAL SOCIETY.

THE third monthly meeting of the Society was held in the Library of the Infirmary, on Thursday, December 10th, 1874—Dr. Denham, Vice-President, in the chair.

The following gentlemen were elected members of the Society :—

- Robert T. Beamish, M.D. (Dublin), Blanchland.
- James Rawlings, M.R.C.S., Hartlepool.
- John T. Clarke, M.R.C.S., Felling.
- Alexander Frazer, M.B., C.M. (Glasgow), Old Shincliffe.
- Thomas A. Dodd, M.R.C.S., Newcastle.
- James McGregor MacLagan, M.D., Riding Mill.
- John Spear, M.R.C.S., South Shields.

The following gentlemen were proposed for election :—

- J. N. Fleming, M.D. (Edin.), Newcastle.
- J. A. Hickson, M.B. (Dublin), Thornley Colliery, Durham.

The CHAIRMAN stated that at the next meeting of the Chemical Society, to be held in the Lecture-room of the College of Physical Science, on Thursday evening next, at 7·30 p.m., a paper would be read by Dr. Lunge, on “Alkali Works’ Sanitary Statistics.” Any members of the Medical Society who cared to be present were invited to attend.

PREVALENT DISEASES OF THE DISTRICT.

Mr. HENRY E. ARMSTRONG presented the following
Return of Admissions to and Deaths at the Newcastle Fever Hospital, during November, 1874 :—

	ADMISSIONS.	DEATHS.
Enteric Fever	6	1
Scarlet Fever	8	2
Continued Fever	2	—
Typhus	3	1
Total	19	4

In the fatal case of enteric fever, the delirium was peculiar, and ended in coma—there was insanity in the family. The fatal cases of scarlet fever were of the form of scarlatina anginosa. One died from exhaustion, &c., on the 12th day; the other from pericarditis on the 41st day. The latter case had no previous rheumatic affection that could be ascertained. One of the cases of enteric fever (still in Hospital) is complicated with pneumonia. One had marked ecthyma, and one is still suffering from a bed-sore. One of the cases of typhus (still in Hospital) was rather remarkable for the form of the delirium which very much resembled that produced by chloroform.

Dr. NEWCOMBE stated that the Gateshead Fever Hospital was full, and that there was some talk of erecting another hospital. Since the cold weather had set in there had been a diminution in the number of cases. He had not met with any cases of typhus. Most of the cases of typhoid were of a mild type; the mortality in Gateshead had been slight.

Dr. YELD stated that in Sunderland, during the past month, many cases of scarlet fever had occurred. There had also been some cases of typhoid and typhus. At the present time there was no case under treatment in the Sunderland Fever Hospital, and the epidemic of scarlet fever was on the decline. He called attention to the high death-rate throughout the country generally, and pointed out that this was owing to the extreme cold.

Dr. HUNTLEY stated that scarlet fever and typhoid had prevailed somewhat extensively in Jarrow and district. A few cases of typhus had also been met with. He was afraid these were the beginning of an epidemic of that frightful disease. The death-rate in Jarrow for the past month had been very low—only at the rate of 22 per 1,000 per annum.

PATHOLOGICAL TRAY.

The CHAIRMAN stated that Dr. Heath was unable to be present, being confined to the house by a severe cold. Dr. Heath's specimens of urinary calculus would therefore stand over until the next meeting.

Dr. BYROM BRAMWELL exhibited (1) Three specimens of cancer of the liver. He stated that all three of the patients were females; and in this respect his experience was different from that of most writers on the subject. Almost all the other cases he had had were females. The disease is generally stated to occur as commonly in males as in the opposite sex. The ages of two of the

patients were about 50, and the third was 70 years old. Two of the cases were primary, and the third—that of the old woman—was secondary to scirrhus of the breast. In two of the cases the cancerous tissue was infiltrated throughout the entire organ. In these two cases the form of cancer was encephaloid. In the third case the cancer occurred in nodules, healthy portions of hepatic tissue intervening. With regard to the clinical history, the third case was not manifested by symptoms during life. In the two primary cases there were marked symptoms. In one, the patient had for many years been subject to bilious attacks. Her fatal illness lasted many months. In that case the most prominent symptoms were great pain and tenderness over the enlarged organ (this was owing to peritonitis, a common event in these cases where the cancerous substance invades the surface of the organ), vomiting, jaundice, great emaciation, ascites. The third case was somewhat peculiar. The patient, when first seen by Dr. Bramwell, was extremely ill, greatly emaciated, deeply jaundiced, the liver enormously enlarged, especially in the epigastric region, where it stood prominently out in the form of a tumour the size of a child's head. Over this prominence there was slight pitting and tenderness on pressure. The pulse was 68, the temperature normal, the tongue dry and brown, the teeth covered with sordes. The patient stated that she had been quite well until six weeks ago; that she caught cold, became feverish, felt a pain over the region of the liver, and vomited. The vomiting continued, the other symptoms left her, after a few days' rest in bed, but she rapidly lost flesh, became jaundiced, and gradually sank into her present prostrate condition. The diagnosis lay between hepatic abscess and cancer. In favour of the former, was the early history and rapid progress of the case; in favour of cancer was the great rarity of hepatic abscess, the absence of any previous intestinal affection, the general enlargement of the organ, and the absence of pyrexia. The balance of evidence was, therefore, in favour of cancer.

2.—*Hydatid Mole*.—Dr. Bramwell exhibited a beautiful specimen of “Uterine hydatids,” and stated, in answer to Dr. Peart, that in these cases there were no true hydatid disease. The vesicles were the degenerated villi of the chorion. Some pathologists say that the degeneration commences in the vessels; others, in the exochorion or epithelial covering of the villi; others, again, in the endothelium. The result is the transformation of the villi into strings of vesicles—the vesicles consisting of mucous-like tissue, similar in structure to the gelatinous tissue which forms so large a part of the umbilical cord.

Dr. GIBSON stated that in some cases he had found the degeneration very limited. He agreed with Dr. Bramwell that there were in these cases no true hydatid disease.

Dr. GOWANS said his experience agreed with that of Dr. Bramwell—that cancer of the liver was more frequently met with in females than in males. He would like to know in what proportion of cases was jaundice present, and how was the absence of jaundice to be explained?

Dr. BRAMWELL stated that jaundice was present in the majority of cases he had met with. The presence or absence of jaundice probably depended upon the fact whether or no there is sufficient healthy hepatic tissue left to carry on the excretion of bile. He had always seen jaundice in those cases where the whole organ was infiltrated.

Dr. GIBSON thought there were two factors—the amount of degeneration of the hepatic cells, and the amount of pressure excited by the cancerous products on healthy hepatic cells. He agreed with Dr. Bramwell in thinking that in those cases where there was a great amount of degeneration jaundice is generally present.

Mr. MORGAN exhibited a very fine specimen of cancer of the liver, and said the patient from whom he obtained it was a sailor, 76 years of age. He was admitted into the Sunderland Infirmary on the 13th October, 1874, complaining of difficulty in making water, shortness of breath, pain in the right side, and occasional vomiting. The urinary trouble was found to be caused by a stricture at the orifice of the urethra. On examining the abdomen, the liver was found to be considerably enlarged. The abdominal walls were very rigid, and the patient complained of great pain and tenderness on pressure. It was difficult, therefore, to perceive whether the surface of the organ was smooth or nodulated. The stricture was relieved by incision. The vomiting, pain in the hepatic region, gradually got worse, the patient became markedly cachectic, and finally died on December 2nd. The *post-mortem* was made 48 hours after death. The liver was found to be greatly enlarged, weighing between 9 and 10 lbs. It was studded throughout with cancerous nodules, of a yellowish white colour, varying in size from a pea to an orange. The superficial nodules projected beyond the surface of the organ, and were here and there markedly umbilicated. The liver was firmly bound by adhesions, both old and recent, to the adjacent structures. Cancerous products were not found in any of the other organs. The heart was in an advanced stage of fatty degeneration. An interesting point in the treatment of this case was the fact that the vomiting was completely relieved by liquor arsenicalis, given in five-drop doses three times a-day.

EPITHELIOMA OF THE FLOOR OF THE MOUTH, WITH PART OF JAW, REMOVED BY GALVANIC CAUTERY—RECOVERY.

BY ANTHONY BELL.

L. B., aged 36, a strong-bodied man, dark complexion. No trace of similar disease in family history; smokes a clay pipe. A deep-seated indurated ulcer, with ash gray surface, about the size of a shilling, occupied the floor of the mouth, extending to within the eighth of an inch of the frænum linguæ on the right, and the same distance off the first molar tooth on the left. The ulcer admitted the tip of the finger. Previous to my seeing him, had been under local and constitutional treatment since the commencement of the disease, five months ago, and caustic applications had been frequently applied. Complained of much pain in the ulcer and jaw. Glands slightly enlarged below the latter.

July 6th. Chloroform having been administered, Dr. Page, who kindly assisted me, opened the operation by extracting the right incisor and first molar tooth. I commenced to reflect the gum and mucous membrane, and with it as much of the periosteum as was possible from that portion of the jaw to be removed, and the whole of the parts were then separated from the bone one inch to the right of the symphysis, and backwards as far as the last molar tooth on the left. The parts were then turned over the chin, and a strong backed double-cutting saw sent first through the alveolus and then the ramus, and finally divided by the forceps. The detached portion of jaw was drawn well forward, and the growth encircled by a wire ecraseur, which was slowly screwed up and connected with the battery. The division of the part occupied half-an-hour.

July 7th. Slept well; had nearly two quarts of milk. Pulse 88; temperature 99. Mouth syringed out with cold water, acidulated with carbolic acid, which he expressed as cooling and refreshing.

July 8th. Pulse 84; temperature 98. Takes plenty of beef tea.

July 9th. Pulse 88; temperature 98. Cavity syringed out half-a-dozen or more times a-day.

July 10th. A dose of oil given.

July 11th. Bowels freely moved. Ordered port wine and eggs. Improving rapidly.

July 12th. Up nearly all day. Parts granulating kindly. Ends of bone entirely covered. Articulates fairly.

July 13th. Wishes to go out.

July 17th. Cavity almost healed. Uses a gargle of rose-water, carbolic acid, and glycerine frequently.

August 12th. Patient quite recovered.

The following report of the specimen was kindly favoured me by Dr. Philipson:—"Microscopical examination of a scraping from the ulcer previous to operation. Cells distinct, large in size, multiform in shape, containing large nucleus and nucleoli."

REGARDED AS MALIGNANT IN NATURE.

Examination of portion of inferior maxilla removed.

The portion of the maxilla measured one inch and-a-half in length, and contained the second lateral incisor, the canine, the two bicuspid teeth, and the cavity of the first molar tooth (the first molar tooth having been withdrawn during the operation). The cutting surface of the incisor tooth was flat, while that of the canine and the first bicuspid were eroded nearly to the gum, into a hollow concavity. (The appearance was that as if there had been frequent attrition from the stem of a pipe.) The periosteum was rough, thickened, and soddened. The bone both on its inner and outer surface was of the usual appearance and consistence.

The ulcer was about half-an-inch across, one-third of an inch deep, ash-coloured, and ragged. Surrounding the ulcer, the tissue, fully for half-an-inch, was indurated, and upon section was of a yellowish white colour, and of the consistence of soft cartilage. Under the microscope, the juice from this tissue contained cells, similar in character to those described as from the scraping of the surface of the ulcer.

Gentlemen, I must apologize for troubling you with a case so uninteresting. My only object in bringing it before your notice this evening was simply to show what can be done through the mouth in operations upon the jaw and the tongue, to make no incision and to preserve the facial artery. This was successfully accomplished, and there was not the slightest splintering of bone. The division of the structures was slowly but safely effected by the cautery, a steady dull red heat being kept up during the whole of the operation by the battery. There was no hæmorrhage, and from the first no plug or dressings were used, otherwise than by frequent syringing and gargling. The ends of the jaw are firmly united. The patient articulates well, and no deformity exists, as may be seen from the photograph. After reading the very interesting and careful description of the specimen given by Dr. Philipson, I think there cannot be two opinions regarding the removal of a portion of the jaw in this case. Note the condition of the periosteum.

Dr. YELD said, two years ago, he had removed the jaw for a cancer; in this case, the disease returned within six months. He asked what was the experience of other gentlemen present on this point? How long did the patient generally remain free from the disease?

The CHAIRMAN said he had, last year, operated in two cases of epithelioma of the lips. Both of these patients were now dead.

Mr. BELL said it was difficult to answer Dr. Yeld's question. In all cases the operation should be performed as soon as possible. It was no use operating unless there was a reasonable prospect of removing the whole disease.

THE ORIGIN OF TYPHOID FEVER.

By HENRY JOHN YELD, M.D.,

MEDICAL OFFICER OF HEALTH, SUNDERLAND.

Enteric, or, as it is popularly called, Typhoid Fever, is a disease to which much prominence has recently been given by the public press, as one which may be looked upon as almost, if not entirely, preventible; and as such it is worthy of our most thoughtful and careful consideration.

It is only my intention to enter into the question of the etiology of this disease, *not* to compare it with typhus or other form of zymotic, but simply to take for granted that it is a separate specific disease, characterised by certain symptoms and peculiarities, and producing distinct pathological conditions; and to endeavour to trace out the origin, or first cause, of a disease which in this country is so fatal to human life.

The causes of outbreaks of typhoid fever are usually ascribed either to the drinking of impure water, or milk adulterated with impure water, or to the inhalation of impure air.

The recognition of impure water, as a cause of this disease, is of modern origin, the first case noted in this country being in 1852, when a severe outbreak of typhoid fever took place at Croyden, and when it was shown by Dr. Carpenter, of Croyden, that it was partly, at any rate, spread by the pollution of the drinking water from the contents of cesspools.

From that time to the present, satisfactory evidence has from time to time been made public, showing the same results to arise from similar causes, but such cannot well be the case when the disease breaks out in a locality where the water is pure, and free from all traces of nitrogenous or organic matter, and which it undoubtedly does, so that there must be some other means whereby the germs of the disease are introduced into the system, viz., by the inhalation of impure air.

As illustrative of the production of typhoid fever by both these means, I propose giving you the particulars of two typical cases, which have recently come under my own observation. Some two or three weeks since, I was asked by Mr. Welford to accompany him to Silksworth House, near Sunderland, to look through the house and grounds, in order to ascertain, if possible, the cause of an

outbreak of typhoid fever which had occurred there. Several members of the family had been ill of the disease, and two were ill at the time of my visit. Upon examination, there was nothing found in connection with the drainage of the house to account for the disease; but when we came to the question of water supply, we were not long in finding out the cause. Some twenty years ago, Silksworth House was supplied with water from a well, sunk some 120 feet into the limestone rocks, and a remarkably pure water was obtained from it, but owing to General Beckwith suffering a good deal from gout, it was deemed desirable by his medical adviser, Sir John Fife, that he should not drink this water, in consequence of it being a very hard water. So this well was closed. At the foot of the lawn, sloping down from the front of the house, is a large pond, and within a few feet of this, was found a spring of clear water. This was protected by a circular wall some three or four feet in depth, and the water as it wells up has been pumped through a pipe into the house and used for all domestic purposes.

This had been the only water supply since the old well was closed, and it had been drunk apparently without having produced any injurious effects until recently. On visiting the spring, my impression was that the water was supplied to it, partly by the surface water from the high ground behind and partly from water which had percolated through the bed of the pond, as the water in the well and the pond appeared to be on the same level. The pond was only partially full of water, and on a gentleman, who was present, stepping down on to the apparently solid exposed bed of the pond with the intention of taking the level, he sank nearly up to his knees, into a mass of black filthy mud, consisting of all kinds of decomposed vegetable and other matter. This showed very clearly the nature of the strata through which the water had to pass before reaching the spring.

A qualitative analysis of this water, which was beautifully clear and bright, showed that it contained chlorides, nitrates, nitrites, but no sulphates, together with a considerable quantity of nitrogenous matter, as shown by the Nessler test. A microscopical examination showed the presence of infusoria, bacteria, and other low forms of life. A sample of the water is on the table. I will apply the Nessler solution, when you will see a yellowish brown deposit settling down to the bottom of the vessel, indicating the presence of ammonia. There is no doubt but that in this case the disease was produced by the drinking of this impure water; a fresh supply was obtained from other sources, and the disease has now entirely disappeared. My second case illustrates pretty forcibly the effect of impure air in producing this disease.

At the beginning of last August I received intimation of the death of a lady in Sunderland, who had died of typhoid fever. The

water supply could not be blamed in this case, as the Sunderland water is extremely pure, and entirely free from any organic matter. An examination of the house showed nothing particular, except that it was infested with rats, and that the underground rooms were somewhat damp. The water-closet and house drains communicated directly with the main sewer, but I think it very improbable that any sewer gas could escape into the house except that generated in the house drains, as the main sewers are well ventilated by ventilators within a few yards of the house. Complaints were made that there was at times a noxious smell from the closet, and I gave instructions for it to be taken to pieces. On this being done, it was found that a considerable quantity of foetid organic matter had been deposited on the outside of the basin and metal pan, the effluvia from which was highly offensive, in fact, so much so that I felt quite unwell for a day or two after visiting the house. The effect produced by the foetid deposit would be that each time the closet was flushed the offensive gas generated between the pan and the syphon below would escape into the rooms, and produce injurious effects upon those exposed to its influence, particularly if at the time, the person so exposed was in delicate health.

The deposit, when examined with the microscope, was found to be composed of various kinds of organic matter, both vegetable and animal, carbonate of lime, &c. There was also a species of mould covering the deposit which rapidly disappeared as the deposit became dry. Dr. Fergus, of Glasgow, stated some time ago that he frequently noticed a peculiarly offensive sickly odour in attending patients suffering from typhoid fever, and in all cases traced it to the lead syphon and soil pipes of the water closet. On examination, these were always found to be perforated with small holes, through which the gases escaped into the house. In some instances, the whole interior of the pipe was eaten away, and lined with a light-brown powder, which was found to contain from 86 to 92 per cent. of carbonate of lead and 2 to 3 per cent. of carbonate of lime. You will perceive that the deposit found by me was not in connection with the soil pipes, but with the outer side of the basin, when it was quite out of sight, and where it could give off its deadly effluvia very readily.

These are the facts connected with these two outbreaks of typhoid fever, and now comes the question, what are the inferences to be drawn therefrom? The fact, I think, is, that persons may for a considerable time drink an impure water, or occasionally inhale impure air, without its producing any injurious effect, and that the system has power to throw off the germs of disease received within it, until, it may be, such an accumulation of these germs takes place within the blood, that ultimately they begin to produce their zymotic effect, and produce this particular form of disease.

Doubtless, a large quantity of impure water is drank daily throughout the country, and we know, a good many of us by observation, that hundreds of men are weekly exposed to the influence of sewer gases without any ill effect being produced upon them, so that one naturally comes to entertain the belief that although water may be impure, and sewer gases detrimental to those who inhale them, there must over and above that be some specific germ, present in the water or in the air, as the case may be, at a given time, which sooner or later will produce this specific disease.

What that specific germ may be, I am not prepared to say, but most likely it is of a vegetable origin, living substances, as infusoria, fungi, alga, or their germs, will produce disease. Hay fever is produced in many persons by the effluvia from grasses, sea weed, and the pollen from flowers. The spores of certain fungi in falling on a proper soil may cause disease of the skin in men, and thus tinea and favus are sometimes spread. Dr. Salisbury, an American physician, has affirmed that the prevalence of measles in the Federal army arose from fungi from mouldy straw.

There is no doubt that atmospheric conditions have considerable influence in determining the different forms epidemics assume, and we know that certain seasons have a strong tendency to favour the development of fungi and other low forms of vegetable life ; and that being so, is it not probable that when such low forms of life exist they will partake in a great measure of the character of the soil in which they are developed, so that the spores of fungi developed upon two different kinds of soil might produce on the same individual entirely different results when introduced into the system.

What favours the germ theory is, the power of growth and multiplication which some of the contagia have after being introduced into the system. The contagia or germs of smallpox and scarlatina poisons may infect the air of a room for weeks, and enteric fever poison will last for months ; and Dr. Parks affirms that in this they resemble the Protococci and other low forms of life, which can be dead for years and yet retain their vitality ; and in a case related by Dr. Becker, of the Army Medical Department, he states that the typhoid poison appears to have adhered to the walls and ceilings, and to have retained its power to excite disease in another person for a month.

On a thoughtful consideration of this intricate question of the origin and propagation of typhoid fever, and other diseases of the zymotic class, the only conclusion at which we can arrive is that propounded by Dr. Sausom, viz. :—

“That the poisons of spreading diseases are extremely minute living organisms, having the characteristic endowments of vegetable

growth, analogous to the minute particles of vegetable protoplasm, whose function it is to disintegrate and connect complex organic products, owing their specific properties in the special disease, not to any botanical peculiarities, but to the characters implanted in them by the nature of the soil in which they first sprung, from innocuous parents, and from which they are transmitted, this soil (except in the case of their earliest origin) being the fluid of the animal body.

Mr. ARMSTRONG said he had listened with much pleasure to Dr. Yeld's paper, and he agreed with the writer in thinking that we must look for the poison of typhoid either in the air inhaled or in the water drunk. The nature of the specific poison was another question; Dr. Yeld had stated that it was in all probability a minute vegetable organism. Such an organism had never yet been demonstrated, and until this was done he (Mr. Armstrong) thought we might just as probably conclude that the poison was of a gaseous nature. With regard to the question of contagion, Mr. Armstrong stated that since the last meeting of the society he had met with another case, which tended to show that the disease might be communicated from person to person. A girl who was staying at Gateshead, took ill of enteric fever. After the disease declared itself, she was sent home to her family, in Newcastle. All the members of that family were well. The girl died on the twelfth day of the disease, and since her death two boys in the same house have taken the disease.

Dr. FLEMMING said that, while in practice in Cumberland, he had been called to see a shepherd who lived by himself on the top of a hill. He found the man suffering from typhoid fever. After a severe attack, the patient died. The diagnosis was verified by a *post-mortem* examination. This man had had no communication whatever for three months with any one. The disease must, therefore, have originated in the place itself. No cause could be ascertained; the water was good, and could not have been contaminated by the sewage from the house, for the spring was 50 yards higher up the hill than the house. With regard to the question of the odour in typhoid, he, while acting as resident physician to the Fever House in Edinburgh, knew a nurse who was able, from the smell alone, before the rash and other characteristic symptoms had appeared, to tell correctly in the great majority of cases whether the patient had typhoid or typhus.

Mr. GOWANS thanked Dr. Yeld for his paper and Mr. Armstrong for his remarks, and said the great question was whether typhoid fever can arise *de novo* or not, whether the specific poison, whatever it may be, can arise spontaneously, from sewer emanations. A case had occurred in his own practice. In the village of Harton

he had in one house a case of puerperal fever, in another a case of erysipelas, in a third a sore throat, in a fourth two cases of typhoid. On examining the drains they were found to be completely plugged up. Had the sewer emanations, which freely entered the houses from these blocked up drains, caused all these various forms of disease? The question was a difficult one to answer. Dr. Gowans said he had never noticed any peculiar smell in typhoid. Several times in typhus he had noticed a peculiar odour, like the smell of mice.

Dr. YELD said the question of contagion was important. In one case lately, he had sent an official to disinfect a house in which a case of typhoid had occurred. The Inspector was told by the occupiers that the disease was not infectious, and that disinfection was, therefore, unnecessary. The smell which Dr. Fergus had perceived was not from the patient, but from the soil pipe, which was eaten through in the manner he had described. Dr. Yeld thought that imperfections in the house drains, over the laying of which the sanitary authority has no control, were, in many cases, the cause of typhoid.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

THE fourth monthly meeting of the Society was held in the Library of the Infirmary, on the 14th January, 1875—the President, Mr. Broadbent, in the chair.

The following gentlemen were elected members of the Society :—

J. N. Fleming, M.D. (Edin.), Newcastle.

J. A. Hickson, M.B. (Dublin), Thornley Colliery, Durham.

The following gentlemen were proposed for election :—

Allen Walker, M.B. (Glasg.), Seaton Burn.

D. Jackson, M.D. (Glasg.), Hexham.

PREVALENT DISEASES OF THE DISTRICT.

Dr. BRAMWELL, in the absence of Mr. Armstrong, who was attending the Sanitary Conference at Birmingham, read the following

Return of Admissions to and Deaths at the Newcastle Fever Hospital, during January, 1875 :—

	ADMISSIONS.	DEATHS.
Enteric Fever	11	2
Typhus	22	4
Pneumonia	2	—
Tabes Mesenterica	1	—
Mania	1	—
Total	37	6

Of the enteric cases, one (fatal) was complicated with double pneumonia, and one was a relapse; the rest were simple. Of the typhus cases, whilst all have been severe, at least four (uncomplicated) merited the term malignant. Two were complicated with double pneumonia, and three with general bronchitis. One case, characterised by extreme exhaustion, marked lividity, and cold sweats, owed his revival chiefly to the application of warmth. When apparently moribund, and almost unable to swallow, this patient was placed before a good fire, and had warm bottles, &c., applied to the surface, with the effect of restoring the circulation in the almost pulseless vessels, after which the patient recovered without a bad symptom.

One case of typhus was followed by mania. One case of mania, two cases of pneumonia, and one of *tabes mesenterica*, were sent to hospital in mistake as cases of typhus.

Dr. BRAMWELL remarked on the large number of cases of typhus, and asked whether other gentlemen had met with many cases of that disease.

Dr. DENHAM said he had seen very little typhus. He had had some cases of enteric fever, and several of erysipelas. He had also heard of several cases of puerperal fever, but none had occurred in his own practice.

The PRESIDENT said since the last meeting he had met with between 20 and 30 cases of typhoid, almost all of them young people; all had done well. He had not seen any erysipelas nor puerperal fever.

Dr. GIBB said that, two months ago, he had under his care nine cases of typhoid; at the present time he had only one. In two of his cases, a relapse had been brought on by eating vegetables. Both of these relapses had been very severe; one had proved fatal.

Dr. ARNISON said he had met with two cases of typhus within the past few days; one had died, the other had been removed to hospital. Before these cases occurred, he had not seen any typhus for a long time. He had had several cases of typhoid. Four had occurred in one family. He was unable to detect any cause for this outbreak. There was no water closet in the house. The family used an earth closet, which was in good order. Most of the cases he had seen had been of a mild type. One patient took a violent relapse after being out for a walk; furious intestinal hæmorrhage came on, and he died on the 10th day of the relapse from pneumonia and diarrhoea.

Dr. NEWCOMBE said that fever had diminished in Gateshead during the last month. The fever house was not now full. He had heard of one case of small-pox.

PATHOLOGICAL SPECIMENS.

Dr. HEATH exhibited 13 stones, removed by lithotomy, and the fragments of one stone crushed by lithotrity, and said that he was in the habit, every two or three years, of showing to the Society the result of his operations for stone. The 14 cases, of which the results were before the meeting, had occurred in his practice (public and private) during the past 18 months. Six of the cases of lithotomy had been operated upon in the Infirmary; seven outside. All of the cases had done well. He did not intend, on the present occasion, to go minutely into the details of these cases, but he thought a few particulars might not be uninteresting. (Some of these particulars have been arranged in the following table):—

TABULAR STATEMENT OF DR. HEATH'S THIRTEEN CASES OF LITHOTOMY.

Case.*	Sex.	Age.	Date of Operation.	Date of Result.	Nature of Result.	Number of Stones.	Weight of Stones	Composition of Stones.
1	Male.	10	17th May, 1873.	31st May, 1873.	Cured.	1	120 grains.	Phosphates.
2	"	3	17th May, 1873.	10th June, 1873.	"	1	15 grains.	Oxalate of Lime.
3	"	60	19th July, 1873.	30th Sept., 1873.	"	1	120 grains.	Oxalate of Lime.
4	"	9	6th Oct., 1873.	18th Oct., 1873.	"	3	131 grains.	Uric Acid.
5	"	69	26th May, 1874.	9th June, 1874.	"	3	60 grains.	Urate of Ammonia.
6	"	8	9th July, 1874.	23rd July, 1874.	"	1	160 grains.	Urate of Ammonia.
7	"	7	18th Aug., 1874.	17th Sept., 1874.	"	1	50 grains.	Oxalate of Lime.
8	"	16	1st Oct., 1874.	30th Oct., 1874.	"	1	206 grains.	Oxalate of Lime.
9	"	56	13th Oct., 1874.	27th Oct., 1874.	"	1	60 grains.	Phosphates.
10	"	43	3rd Nov., 1874.	13th Nov., 1874.	"	1	291 grains.	Phosphates.
11	"	60	21st Nov., 1874.	4th Dec., 1874.	"	1	320 grains.	Uric Acid.
12	"	64	22nd Dec., 1874.	Still under treatment.	Almost well.	1	354 grains.	Small quantity of Phosphates. Uric Acid; Urate of Ammonia; Phosphates.
13	"	58	26th Dec., 1874.	10th Jan., 1875.	"	1	160 grains.	Phosphates.

* Cases 1, 2, 4, 7, 8, 10, were operated upon in the Newcastle Infirmary.

+ In Cases 7, 8, 9, 11, the wound was completely healed. In the other cases the wound was not quite skinned over, but the patients were able to go about.

REMARKS.

Case 5. Patient was a big, stout man; he had suffered for many months from the symptoms of stone. Dr. Heath diagnosed three small stones. The introduction of the sound was followed by alarming symptoms, great irritability of the urinary passage, rigors, fever, large quantities of pus in the urine, and that peculiar irritable red appearance of the tongue, which is such a bad indication in cases of urinary disease. In consequence of these symptoms Dr. Heath decided to give up lithotrity, which he had purposed to perform. The Median operation was performed; three small stones were easily removed. The result was most satisfactory; after forty-eight hours the urine was passed by the natural passage; in a week the patient was walking about, and at the end of a fortnight he went to Rothbury for change of air. The advantage of the Median operation is, that the membranous part of the urethra is opened, the prostate simply nicked at its commencement, the neck of the bladder being uninjured. The key to success is to avoid laceration and bruising of the tissues.

Case 8. The wound was rather long in healing, owing probably to the tissues being bruised somewhat in the extraction of the stone.

Case 9. Small stone removed by Median operation. Lithotrity might undoubtedly have been performed in this case, but the result in case 5 was so favourable that Dr. Heath determined again to have recourse to the Median operation.

Case 10. The patient was a schoolmaster, very nervous and delicate; he had suffered for many years from the symptoms of stone. Dr. Heath diagnosed a phosphatic stone of moderate size. The patient would not have been a good subject for lithotrity, hence the cutting operation was performed. The first incision was followed by violent hæmorrhage, which was controled by the introduction of a petticoat tube and the application of cold, the hips being raised by a pillow.

Case 11. The peculiarity of this case was the great depth of the perineum; the longest and largest tube Dr. Heath possessed was buried in the wound.

Case 12. In this case the stone was almost circular; it was impossible, therefore, to adapt any particular diameter to the opening. This made its extraction very difficult.

In the case of lithotrity the stone was small and phosphatic. It was crushed in three sittings; the patient suffered more than any of the cases operated on by lithotomy; he never had any serious symptoms, but he suffered more or less for six weeks after the last sitting.

The PRESIDENT said he had listened with great interest to the very valuable and instructive remarks of Dr. Heath. The results

obtained were most satisfactory, and in the name of the Society he begged to congratulate Dr. Heath upon his success.

Dr. HOOPGOOD showed a fine specimen of osteoid cancer of the temporal bone, and said Mrs. B., æt came under my care on July 23rd, 1874, and died on November 9th, 1874. From the family history there was nothing to be found to give any evidence of cancer being present. The father and mother, and others of the family, had lived to a good age, and had died from other causes, none of them ever having a tumour of any description. The history of the patient's own life up to 18 months before I saw her was good—having had scarcely any illness, and the only cause she could give for the present disease making its appearance was an injury which she received some time before. The present disease began about two years ago, when she complained of constant pain in the right side of her head, and an occasional attack of sickness, but after being treated for a time this became somewhat better. She was told that it was due to disease of the liver. She next went under another medical man, who examined her head very carefully, and treated the disease as neuralgia, as there was no swelling of any kind present; but soon after this a swelling did appear just in front of and above the ear, and shortly afterwards another formed just behind the ear. This was twelve months before I saw her. From this time both became gradually larger, until July, when I found two tumours close together, each being about $1\frac{1}{2}$ in. across. They presented a smooth surface, hard as bone to the touch, with the veins enlarged over the surface; the scalp could be freely moved, but the tumours were firmly attached to the bone beneath. To state the case shortly, the tumours continued to grow until they joined, became more and more painful, and about a month before death the pain became so great that she was obliged to be kept constantly under the effects of a narcotic. During the course of the disease there appeared in the following order—constant sickness for three or four days at a time, the only medicine which relieved it being opium and sulphuric acid; pain in the left arm; paralysis of right side of face; inability to speak plain; clonic spasm of left arm, after a few days followed by paralysis of the left side of the body; dilated pupils, coma, and death. At the *p.m.*, which I can hardly call such, for the friends would only allow me to remove the tumour, I found in several places that the tumour was uncovered by bone, on the internal surface the bone had been pressed inwards, but the inner table was intact. The tumour, as you will see, is divided somewhat into two portions, the anterior being the smaller of the two. The whole of the temporal bone was diseased, and by passing the finger into the skull, through the opening, made in removing the tumour, the inner table could be felt pressing deeply into the cerebral

matter. The brain was rather softer than natural, but not more so under the disease than elsewhere. The dura mater was not affected.

Dr. B. BRAMWELL exhibited a large fibroid tumour of the uterus, and said, I removed this tumour after death from the body of a woman æt. 47. Deceased, who was a widow, had been married 18 years, but had not had any children. She had enjoyed excellent health until 14 years before her death. She thought she strained herself by lifting her invalid mother in and out of bed; be that as it may, she began to complain about that time of pain and bearing down in the lower part of the abdomen. Six years after these symptoms commenced she noticed a small, hard swelling in the right side of the abdomen, just above the groin. This lump gradually got larger and larger until it attained the immense size which it now possesses. I saw this patient several times during life. The abdomen was enormously distended, containing, in addition to the large dense tumour, a considerable amount of fluid. The tumour was mobile, and seemed attached to the centre of the abdomen. There was no pain; the only complaints were weight and uneasiness, palpitation, and shortness of breath; this symptom depended in great measure upon a weak dilated heart. The patient was very thin and emaciated. The uterine functions had been perfectly performed until three months before death. She had now and then suffered from a white discharge. On examination, the os was natural, the uterus seemed moveable, and the uterine cavity seemed very slightly if at all, enlarged. The patient died suddenly during the very cold weather. The *post mortem* was made 64 hours after death; decomposition was very far advanced. The abdomen contained a large quantity of dark coloured serum; its cavity was occupied by this enormous tumour, which weighs 20 lbs. The omentum was attached to the anterior and upper surface of the tumour; the other viscera were not adherent; there was no signs of peritonitis. The tumour was attached by a pedicle an inch-and-a-half broad and two inches in length, to the fundus of the uterus. On section it is dense and hard, cutting like cartilage. At one point it has commenced to soften. On microscopic examination it was found to consist of fibrous tissue, unstriped muscular fibres, blood vessels, both arteries and veins. These various structures are not arranged in any order—bundles of muscular fibres crossing and re-crossing in all directions. The tumour is, therefore, a so-called uterine fibroid, or, to speak correctly, a myoma, *i.e.*, a tumour containing muscular fibres. The tumour is divided by a deep sulcus into a right and a left lobe. This division could be clearly made out during life. The exterior of the tumour is covered by peritoneum. The surface is somewhat nodulated and irregular. Several smaller fibroids, the size of hazel huts, are to be seen springing from the

uterus. The cavity of the uterus is very slightly enlarged. The heart was dilate, pale, and fatty; the pulmonary artery was considerably dilated. During life there was great distention of both external jugular veins.

Dr. GIBB asked if any member had found any drugs of use in the treatment of these cases. He had used bromide of ammonium, and in some cases he had obtained satisfactory results—when given in large and continuous doses.

Dr. HEFFERNAN said he had at present under his care a well marked case of fibroid tumour of the uterus. Dr. Gibb, who had seen the case with him in consultation, concurred in the treatment adopted, viz., the administration of large doses of the bromide of ammonium. The patient's general condition had improved greatly under this treatment. The tumour had certainly not increased in size, but he could not say that it had diminished. The dose given was 10 grs., three times a-day.

Dr. GIBSON said that he had been much interested in this specimen, inasmuch as the subject had engaged his special attention. He had seen an immense number of these cases, and the point to which he would direct the attention of the society was, the peculiar mode of origin and growth. This subject had been made difficult by the exclusive views of particular writers. The fact was that these tumours were extensions of the uterine tissues, and did not spring from the lateral ligaments, or other parts, as some supposed. When intramural they have always a proper capsule, and never distinct vessels. With regard to the influence of drugs, it must be remembered that these tumours often undergo spontaneous diminution, and sometimes even cure. For his own part, he was firmly of opinion that there was no drug whatever which had the slightest influence on their growth.

Dr. PAGE said he had had an opportunity of seeing this patient during life, and he would like to ask the members whether in a case of this sort, where the uterine cavity is not enlarged, where the uterine functions are normal, and where all the physical signs of an ovarian tumour are present, is it possible to come to a correct opinion as to the nature of the case? Could any gentleman present give him a diagnostic sign of value?

Dr. HOOPGOOD said he knew a case in which a tumour of this sort had been mistaken for an ovarian tumour. In that case the abdomen had been opened, the true nature of the tumour was then discovered, and it was removed in the same manner as an ovarian tumour would have been.

Mr. JACKSON said the operation of tapping would in most cases give a clue to the nature of the case.

Dr. BRAMWELL said in this particular case the operation of tapping had been performed; the fluid was contained in the cavity of the peritoneum. He agreed with Dr. Page in the difficulty of diagnosis during life. In thinking the case over, he was of opinion that the weight of the tumour and its slow growth were important indications. The tumour could be felt to be very weighty, and of a stony hardness, and it had been in all probability 14 years or more in growth. It could not, therefore, be cancerous, and solid ovarian tumours of this size, unless cancerous, are infinitely rare. It might possibly be an ovarian tumour which had taken on a cancerous action, if such a change really does take place.

PAPERS.

Dr. J. W. Macdonald read the first part of an able paper on Bronchial Hæmorrhage, and intimated that he would be glad to continue the subject at the next meeting.

The discussion on the paper was deferred.

The paper will appear when completed.

Dr. B. Bramwell's paper, Notes of a Case of Cancer of the Stomach, was deferred until the next meeting.

The Secretary regrets the great delay in the issue of the Transactions, owing to the photographic plates not having been received from London until June 7th.

ERRATUM.—In page 135, line 24, for “Reinfleich,” *read* “Rindfleisch.”

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

THE fifth monthly meeting of the Society was held in the Library of the Infirmary, on February the 11th, 1875—the President, Mr. Broadbent, in the chair.

The following gentlemen were elected members of the Society :—

Allen Walker, M.B. (Glasg.), Seaton Burn.

D. Jackson, M.D. (Glasg.), Hexham.

The following gentlemen were proposed for election :—

W. C. Allen, M.R.C.S., Willington.

Jas. F. Callcott, M.R.C.S., Newcastle.

J. D. Dixon, M.R.C.S., Newcastle.

J. Davis, M.R.C.S., Sunderland.

Frederick Ransom, M.B., C.M. (Edin.), Sunderland.

Mr. ARMSTRONG moved “that discussions on papers read before the Society, shall take place at the meeting following that at which each paper is read,” and said he believed the proposed alteration would be most advantageous to the success of the Society. The discussions on papers were often very meagre, and quite out of proportion to the importance of the subject and the amount of work expended on the paper. By leaving the discussion until the following meeting, the members would be able to read up the subject, and to do justice to the paper. The system advocated was at work in the Chemical Society, and was found to answer well.

Dr. PEART begged to second the motion. He thought the change would lead to better discussions.

Mr. HUNTLEY asked what would be done at the last meeting, would the discussions be adjourned until the next session?

Dr. EASTWOOD said the proposed change might be advantageous to the town members, but would be most inconvenient to the country members. Many of the country members were unable to attend all the meetings of the Society, and hence they would often lose the discussions, which were often very interesting.

Dr. GIBSON said he was old enough to remember a similar motion to Mr. Armstrong’s being put to the Society and lost. The

proposed change, in some cases, would be an advantage; but it also had very great disadvantages. It was always possible for any member to move the adjournment of the debate.

Dr. EMBLETON said he agreed with Dr. Gibson. He thought there were great objections to the proposed change, and that it was unnecessary. It was always possible to adjourn the discussion, should it be thought advisable to do so. He begged to move a direct negative to Mr. Armstrong's motion.

Mr. JACKSON seconded Dr. Embleton's amendment, and said due notice of the subject of each paper was given in the circular, and consequently, under the present system, the members could, if they liked, read up the subject of the paper.

Mr. A. D. WILSON said, as a junior member, he begged to support Mr. Armstrong's motion. He hoped, if it were carried, the Transactions would be published sooner after each meeting.

Mr. ARMSTRONG, in reply, said he thought the country members would benefit by the proposed change; they would be able to read up the papers in the Transactions, and then attend and take part in the debates—indeed, he had the good of the country members in view in bringing forward the motion. He thought the objections raised did not answer the arguments he had brought forward in favour of the motion.

The amendment was then put to the vote, and carried by a large majority.

PREVALENT DISEASES OF THE DISTRICT.

Mr. HENRY E. ARMSTRONG presented the following

Return of Admissions to and Deaths at the Newcastle Fever Hospital, during January, 1875 :—

				ADMISSIONS.		DEATHS.	
Typhus	...	...	...	14	...	...	2
Enteric Fever	...	...	...	4	...	...	2
				18			4

N.B.—The return for December, 1874, which was printed in last report, was, by mistake, dated as for January, 1875.

One of the cases of enteric fever was complicated with general bronchitis.

Pneumonia complicated one case of typhus, and one of typhoid.

There have been five cases of erysipelas in hospital—three patients suffering from a mild attack of facial erysipelas. A nurse caught, from these, a severe form of erysipelas of head, face, and neck. A second nurse, attendant on the first, contracted the disease in the hand through a scratch on the finger.

All have recovered.

Mr. GOWANS said he would like to know the range of temperature in the case of typhoid complicated with pneumonia—one of the most characteristic features of enteric fever was the evening rise and morning fall—in some cases he had had complicated with pneumonia, this condition had been reversed.

Mr. ARMSTRONG said he had, through absence from home, been unable to keep charts for the last six weeks; he was unable, therefore, to answer Mr. Gowans' question. He had in other cases observed the variation alluded to.

Dr. FOTHERGILL said he had several times observed the same thing in uncomplicated cases.

Dr. PHILIPSON said Mr. Armstrong's statement was important, for it showed that we were passing out of the epidemic of typhoid or enteric fever into an epidemic of typhus. This was important in connection with the "strike" at present existing in the neighbourhood—for if, as he thought, typhus was engendered by poverty and want, this would tend to the development of the disease. He had only himself seen two cases of pure maculated typhus; one of these occurred in Gateshead, and was clearly traceable to infection. In the country there had been several cases of typhoid, and the disease had cut off a young and promising member of the Society, Dr. Reid, of Castle Eden, a gentleman much beloved and respected in the district where he lived. Dr. Reid died after a short illness, his case was peculiar, owing to the intensity of the gastric symptoms. There was intense vomiting, followed by great collapse. Dr. Philipson inferred from the history of the case and the state of the eruption, that Dr. Reid had been going about with the disease on him for some days.

Dr. EASTWOOD said several cases of enteric fever had been reported to the Darlington Rural Sanitary Authority, of which board he was chairman; he had not heard of any cases of typhus.

Dr. FOSS said the frequent mention of typhus in Mr. Armstrong's reports was remarkable; did Mr. Armstrong believe the disease to be endemic in Newcastle?

Mr. ARMSTRONG said Dr. Foss was in error: cases of typhus had only been seen since September last. The disease was not so prevalent as it was last month. He thought the epidemic was on the decline.

Mr. JACKSON said almost every sort of exanthem was to be seen at present in Darlington. Last month, there were three deaths registered as typhus. Small-pox had lately been imported, and had caused two deaths.

Dr. EMBLETON said in certain parts of Newcastle there was an epidemic of fever of a peculiar type. It usually attacks children,

is of eight days' duration, and attended with violent delirium, the febrile symptoms are sharp. There is no eruption.

The PRESIDENT said in his district there was at present no epidemic disease. Dr. Reid was a personal friend of his. He was a young man of great promise, and had died a noble victim to his profession. All who knew him greatly regretted his loss.

PATHOLOGICAL SPECIMENS.

Dr. ARMSTRONG exhibited two large vesical calculi which he had removed by operation.

Dr. PAGE showed a large multilocular ovarian cyst, and said this tumour was removed by me from a woman, aged 29 years. The patient was married, and noticed her belly enlarging three years ago, soon after the birth of her last child. Till nine months ago, however, she suffered no inconvenience beyond that occasioned by her increasing size; but about that time she began to feel a good deal of pain, which induced her to consult a medical man. She was told she had a tumour, and advised to have it removed. Five months ago, her largest cyst was tapped, and a quantity of dark fluid drawn off with an aspirator. From this time her general health, which had been good, began to give way; she lost flesh, suffered a good deal from pain, vomited frequently, and was often confined to bed for several days continuously. The operation proved a very severe one, requiring a long incision in consequence of the number and nature of the adhesions. The whole surface of the tumour was adherent, and the pelvic connections and those to the under surface of the liver were particularly firm. The large cyst was suppurating, which accounted for the woman's general condition. None of the contents of the cyst escaped into the peritoneal cavity. The pedicle, which was long, was secured with a clamp. Equal parts of anhydrous ether and chloroform were administered, and anæsthesia was quickly and quietly produced. The result of the case was unfavourable, the patient dying from shock. A *post mortem* showed that there had been no bleeding. Everything in the belly looked quiet, and free from inflammation.

Dr. BRAMWELL said, through the kindness of Dr. Page he had been present at the operation, and had examined the body after death. The operation, which was a most difficult one, owing to the adhesions being so numerous and dense, lasted an hour and a half. The cause of death, as Dr. Page had stated, was collapse. Though the patient only lived twenty-six hours, the superficial

wound was almost healed, the edges being firmly glued together by lymph; the abdominal cavity contained a small quantity of dark-coloured serum. There had been no bleeding, and no peritonitis.

Mr. MORGAN said Dr. Page's case presented several interesting features; one of them was the feasibility of operating when the cyst contents were in a state of suppuration. Several successful cases of this sort had been recorded by Spencer Wells and Keith. In a case which occurred in his own practice the contents of the sac were purulent; the cyst had not in that case been tapped; the adhesions were most intimate; and the operation was, in consequence, a very severe one. The patient, like Dr. Page's, died of shock.

Mr. HOPGOOD said he had seen a remarkable case, in which the contents of the cyst, a simple one, were purulent. The cyst was several times tapped, and injected with iodine. The patient recovered.

Dr. DENHAM said he believed he had seen Dr. Page's patient in the Ingham Infirmary. He had doubts whether the cyst was moveable or not. In some cases patients lived for years after tapping. In one case he knew of, a woman underwent repeated tapplings, during a period of thirty-five years, and at last died, æt. 75. In other cases recovery had taken place after the fluid had been withdrawn.

Dr. EMBLETON said in many parts of the country records of the number of times the operation of tapping had been performed were found on tombstones. Some women had been tapped hundreds of times without bad results.

Mr. BROADBENT exhibited a specimen of scirrhus of the rectum. The patient, a widow, the mother of a large family, came to him complaining of pain in the lower part of the abdomen, constipation, and difficulty in defecation. She would not submit to a digital examination until shortly before her death. It was then found that the gut was obstructed by a cancerous mass; the cancerous growth could just be reached by the finger. Palliative treatment was adopted. An interesting feature of the case was the fact that the patient's mother is said to have died from cancer of the rectum.

Dr. BEATSON showed a good specimen of fractured cervical vertebræ. The patient (a man), was admitted to the Newcastle Infirmary on the 11th of December, having fallen the previous day down a ship's hold, a distance of 20 feet. On admission, he was completely paralysed. There was fullness, pain, and tenderness on pressure on the right side of the cervical region. There was total loss of sensibility below the level of the 10th rib, marked priapism; and he had no control over the bladder and rectum.

The day after his admission, there was a decided trace of sugar in the urine. The patient died on December 12, having lived 53 hours after the receipt of the injury. On *post-mortem* examination, the bodies and spinous processes of the third and fourth cervical vertebræ were found fractured. The spinal cord was slightly lacerated. A small clot was found in the medulla. The man was, unfortunately, a foreigner, and did not understand English.

Dr. B. BRAMWELL showed an intra-cranial tumour, the size of a small egg, which he had removed from the body of a man, æt. 41, who was admitted to the Newcastle Infirmary in November, 1874. The history of the case was as follows :—The patient, for a year past, had suffered from loss of vision. Three months ago he had an attack of left-sided hemiplegia. On his admission, he had, to a considerable extent, regained the motive power both of the arm and leg. Sensibility in the arm, however, was still absent, and, in this respect, the case differed from the ordinary type—sensibility being, as a rule, regained before motion. On ophthalmoscopic examination, there was well marked atrophy of both optic discs. The patient continued to improve until December, when he began to complain of severe pain in the head. Three days after the pain commenced he took a fit, became comatose, and died in a few hours, apparently from apoplexy. There was a distinct history of syphilis. At the *post mortem*, a nodulated tumour, the size of a small hen's egg, was found springing from the dura mater, over the convex posterior end of the right hemisphere. The dura mater itself was much thickened. The brain substance was pressed upon by the tumour and much softened. The other organs were healthy. On microscopic examination, the tumour was seen to consist of numbers of round cells, about the size of blood corpuscles. There was also, in some parts of the tumour, a small quantity of delicate fibrous tissue.

2. A coloured cast of a cut throat. The wound was of great size, measuring 6 by $3\frac{1}{2}$ inches. The trachea was cut through in six different places. The œsophagus was completely divided. The sheath of the great vessels on the right side was opened. The carotid artery could be seen bare and pulsating in the wound. The patient died of exhaustion 12 hours after his admission. Dr. Bramwell stated that he had brought forward this specimen chiefly with a view of directing attention to the condition of the lungs. On the anterior border of the lower lobe of the right lung several small, bright red spots, the size of a split pea, were seen. On microscopic examination, numerous large pale cells, with large oval nuclei, were found in these bright red patches. Some of the cells contained pigment; others were completely filled with fatty granules, and had assumed the form of compound granular cor-

puscles. These cells were evidently swollen epithelium cells, some of them in a state of fatty degeneration. These appearances corroborated Dr. Macdonald's experiments, which were detailed in his paper on "Bronchial Hæmorrhage."

3. Specimen of Jaborandi, which had been kindly sent to the Infirmary by Mr. Brady. Dr. Bramwell had made several experiments with the drug, and could corroborate most of the statements of Dr. Ringer, published in the *Lancet*. In all Dr. Bramwell's cases sweating had been produced; in some salivation. In all, there had been a temporary rise in frequency of pulse, and decrease of temperature; in most, a desire to make water. In no case had the drug caused diarrhœa. Dimness of vision and double vision had been produced in some. In none had there been contraction of the pupil. The drug had been given in two cases of sub-acute rheumatism, and, in both, had had a bad effect, the patients experiencing a marked relapse. In another case it had been followed by a paroxysm of asthma. This patient had had previous paroxysms. In one case—a girl suffering from psoriasis—it had been followed by severe pain in the knee joints. The drug was administered as an infusion, the dregs being swallowed. It was possible that there were two active principles, the one which causes sweating being more soluble than the other which caused salivation. No characteristic appearances had been seen by the ophthalmoscope.

4. A heart taken from a man who had suffered for some months from cardiac dropsy. The patient was a very big, strong man, a labourer. He had enjoyed perfect health until a year before his death. He never had had rheumatism. The early history of the case was interesting. One morning, on getting out of bed, he heard a peculiar noise. He looked under the bed, all about the house, inside and outside, but was unable to find from whence it proceeded. He at last came to the conclusion that it must be inside his own body. He consulted a doctor, who told him he had heart disease, and that this was the cause of the sound. He was admitted into the Newcastle Infirmary under Dr. Philipson. The murmur could at that time be heard distinctly at a distance of two feet from the body. He remained in the hospital some weeks. The musical character of the murmur disappeared. At the time of his discharge he was considerably relieved. He returned to his usual employment, but found he was unfit for heavy work; dropsy set in, dyspnœa became urgent, and he was again admitted into the Infirmary. The heart was now considerably dilated and hypertrophied, and, in addition to the double aortic murmur, there was a well marked systolic murmur at the apex, with marked accentuation of the pulmonary second sound, showing that mitral regurgitation was going on. Under the free use of digitalis rest and tonics

he improved, the dropsy left him, and he was again discharged, much improved. He continued better for a time, but at length the old symptoms, dropsy, dyspnœa, and cough, again set in, and at the end of last year he was again admitted to this institution. The heart was now found to be greatly enlarged; there was free regurgitation through the aortic and mitral valves. The lungs were in a condition of pulmonary apoplexy. The dropsy was very great, and the dyspnœa now amounted to orthopnœa. The urine was albuminous. In spite of all treatment, the symptoms rapidly got worse, and the patient died after great suffering. The heart was found to be greatly enlarged, both dilated and hypertrophied. It weighs 2 lbs. 13 oz. The aortic valves are quite incompetent, the free margins of the valves being absorbed; the curtains thickened; the aorta is rough and altheromatous at its base. The mitral and tricuspid valves are both dilated. The muscular structure is good. The right lung contained a well marked recent patch of pulmonary apoplexy.

5. Water-colour drawing of the fundus of the left eye of a man, æt. 75, showing a beautiful white patch situated immediately above the optic disc, with a peculiar arrangement of the vessels of the fundus.

Dr. PHILIPSON confirmed Dr. Bramwell's description of the early history of the case, and said the disappearance of the musical murmur was interesting, for it had not been attended with any symptoms of embolism, which was the case in a patient of the late lamented Dr. Charlton—the embolism in that case being due to the small portion of fibrine becoming detached and carried to the brain.

PAPERS.

It being nearly nine o'clock, Dr. Macdonald consented to allow his paper to stand over to the next meeting.

Dr. BRAMWELL asked the Society to take his paper as read, and gave a short verbal description of the case, showing the specimen, several diagrams, and microscopic sections of the tumour.

NOTES ON A CASE OF CANCER OF THE STOMACH.

By BYROM BRAMWELL, M.B.

John Hays, æt. 29, was admitted to the Newcastle Infirmary, under Dr. Bramwell, on the 29th of October, 1874, complaining of difficulty in swallowing, shortness of breath on exertion, emaciation, and debility.

Previous History.—Patient states that for some years he served in the army, that lately he has been working as a miner. (After his death it was ascertained from his friends that he had been for some time engaged as a prize-fighter, and that he had on one occasion received a severe blow beneath the belt.)

Until his present illness commenced he enjoyed excellent health. Thirteen weeks ago he got cold while working in a cold damp pit, took a shivering, became feverish, and began to cough. These symptoms were soon followed by a pain in the abdomen, and a catch in the breath. At the end of a week he experienced some difficulty in swallowing. Since his illness commenced he has been gradually getting worse and has rapidly lost flesh.

Present Condition.—Patient is sallow and emaciated; the left pupil is slightly larger than the right. He complains of pain and tenderness on pressure in the epigastric region. No tumour can be felt (it is difficult to make a satisfactory examination, as the abdominal walls are kept very hard and tense).

On inspection the abdomen looks natural.

On percussion there is dulness in the epigastric and left hypochondriac regions. Patient complains of difficulty in swallowing; the food, he says, seems to stick at a point corresponding to the lower end of the sternum. The obstruction is not constant; sometimes he swallows a piece of meat quite well, at other times water chokes him. When the bolus of food, or mouthful of water, does go down, it causes him to take a sudden gasp. After eating, he feels a weight and fulness in the epigastrium. He never vomits. The appetite is good; tongue clean; bowels regular.

A faint systolic murmur is heard in the pit of the epigastrium, intensified when pressure is made upon the stethoscope.

Liver dulness measures $3\frac{1}{2}$ inches.

He complains of cough and shortness of breath. There are no physical signs of disease in the circulatory or respiratory organs.

Radial pulse, 80; respirations, 20; temperature, normal; urine sp. gr. 1010; acid, light coloured, slight mucous deposit, containing a little pus, and a trace of albumen.

He was ordered a tonic mixture, and the ordinary diet of the house.

SUBSEQUENT HISTORY OF THE CASE.

Nov. 3. Difficulty in swallowing gone. He thinks he is a little better.

Nov. 8. Swallowing worse than ever. Feels uneasy after eating. Is much troubled with wind. To have a mixture containing bismuth, aromatic spirits of ammonia, spirits of cinnamon, and infusion of calumba. Urine normal.

Nov. 16. Shortness of breath on exertion worse. The respiratory murmur is faintly heard over the left base, and there is here

some dulness on percussion—a few sibilant râles are heard over the rest of the chest.

Nov. 18. Complains of great pain and tenderness in the left hypochondrium and in the epigastric region. The abdomen is distended tympanitic on percussion, except over the painful part. The bowels have been freely opened—to have 2 grains of opium three times a-day until the pain is relieved ; a poultice to be applied constantly to the abdomen.

Nov. 19. No better. Complains to-day of tenderness on pressure in the left lumbar region. Urine sp. gr. 1030—no albumen— trace of sugar—a few pus cells and oxalates.

Nov. 23. Feels and looks worse, the slightest pressure over the upper part of the abdomen causes intense pain.

Nov. 27. At 10 p.m. last night was attacked with severe pain in the upper part of the abdomen—the pain was relieved by a large opiate. Bowels have been three times opened, he passed some lumps of matter which looked like fat. Hepatic dulness now measures 5 inches; is very thirsty, tongue dry and furred; the dulness over the base of the left lung is more marked; vocal resonance and the respiratory murmur are very faintly heard over the dull area.

Dec. 3 No better, the feet and ankles are slightly swollen ; urine contains a decided trace of sugar ; no albumen.

Dec. 6. Severely purged ; the matter passed was liquid, of a dark colour, and very offensive smell.

Dec. 7. Had a very bad night, pain in the abdomen is very severe, the purging still continues.

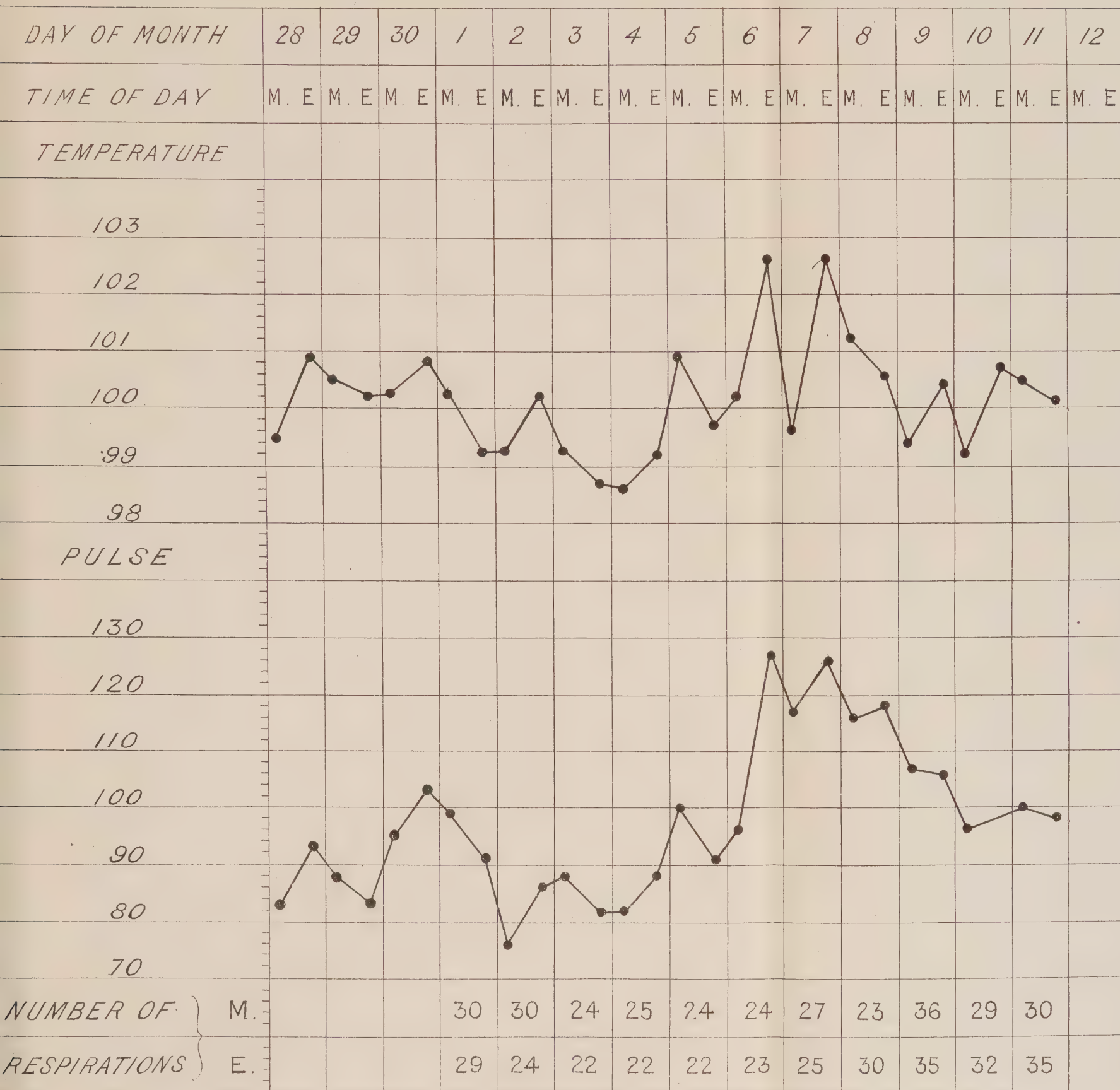
Dec. 11. Vomited a quantity of very offensive smelling dark liquid which, under the microscope, was seen to consist of blood, pus, and much granular and molecular debris.

Dec. 12. The vomiting and purging still continue, in spite of all treatment, the matters passed are of the same dark colour and offensive odour.

Patient died at 8 p.m.

The *post mortem* was made 42 hours after death ; the body was much emaciated. The peritoneal cavity contained a considerable quantity of offensive pus ; the peritoneum was coated with recent lymph ; the intestines were bound together by recent adhesions. The stomach was firmly attached by its sides and posterior wall to adjacent structures. On opening the organ, a ragged, black, fungoid looking mass, the size of a child's head, was seen projecting into, and almost filling, the cavity. The fungoid growth sprang from the posterior surface of the organ ; the base, or attached margin, was hard and indurated, fully the size of the palm of the hand ; the coats of the organ were thickened for a considerable distance round the tumour. At the point where the organ was adherent to the

CHART OF TEMPERATURE, PULSE AND RESPIRATIONS.



liver the coats were very much thinned, and it was here apparently that the peritonitis had commenced. The œsophageal opening was situated beneath the tumour, in direct contact on its right side with the indurated mass forming the base of the tumour. There was no narrowing of the orifice, but the projecting fungoid mass completely overlapped the opening, and closed it in a valvular manner. In contact with the posterior surface of the organ was a mass of enlarged glands; a chain of enlarged glands surrounded the aorta.

The pancreas was enlarged and indurated.

The spleen was large.

The liver was pale and fatty.

The kidneys were large and fatty.

The other organs were healthy.

On microscopic examination, the fungoid mass was found to be composed of fibrous tissue, blood vessels and cells of various forms, round, oval, pear-shaped, cylindrical, containing generally a single large nucleus, and one or more nucleoli. The cells were, for the most part, rather less than the cells of healthy hepatic tissue. The blood vessels and fibrous tissue formed villous-like projections: the surface of the villi was thickly covered by the cells.

The same forms of cells were found in great abundance in the enlarged glands and in the pancreas.

REMARKS.

The interesting features of this case are :—

1. The age of the patient, 29. It is exceedingly rare to meet with cancer of the stomach in persons under thirty years of age.
2. The great extent of the disease in the stomach itself and in surrounding structures.
3. The almost total absence of stomach symptoms, vomiting, &c.
4. The peculiar manner in which the projecting mass of tumour blocked up the œsophageal orifice explaining the dysphagia, and preventing vomiting.
5. The nature of the tumour had apparently been a solid cancer, which had undergone extensive softening and ulceration at its free margin, and was not a true villous growth.
6. The extensive and early peritonitis.
7. The close relation which the temperature bore to the pulse, the slightest variation in the one being accompanied by a corresponding variation in the other.—See chart.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

THE sixth monthly meeting of this Society was held in the Library of the Infirmary, on the 11th of March, 1875—the President (Mr. Broadbent) in the chair.

The following gentlemen were elected members of the Society :—

W. C. Allen, M.R.C.S., Willington.
Jas. F. Callcott, M.R.C.S., Newcastle.
J. D. Dixon, M.R.C.S., Newcastle.
J. Davis, M.R.C.S., Sunderland.
Frederick Ransom, M.B., C.M. (Edin.), Sunderland.

The following gentleman was proposed for election :—

Jos. F. Armstrong, M.R.C.S., South Shields.

PREVALENT DISEASES OF THE DISTRICT.

Mr. HENRY E. ARMSTRONG presented the following

*Return of Admissions to and Deaths at the Newcastle Fever Hospital, during
February, 1875 :—*

			ADMISSIONS.			DEATHS.
Typhus	...	...	14	...	...	1
Enteric Fever	...	...	1	...	...	—
			—			—
Total	...	...	15			1

Single typhus cases were admitted from Bankside, Shepherd's lodging-house, Stockbridge, Henry Street, Cherry's Entry, Pandon, Blandford Street, and Sunderland Street. Two cases were sent from the Dog Bank, two from the Vagrant Ward, and four from the Workhouse, one of which last died. The case of enteric fever was from Churchill Street.

Of the typhus cases, upon the whole, the type is less severe than during the previous months. One case (severe and marked) was said to be a relapse. Whether the primary fever, for which the patient had been treated in another hospital, was typhus, there was no evidence to show. One case was followed by abortion at the third month ; one case was threatened with gangrene of the toes ;

and another was complicated with marked purpura. Both are convalescent. The fatal case of typhus was that of a man aged 58 years. The direct cause of death was asthenia.

Dr. MACLAGAN said that some cases of small-pox had occurred at Prudhoe. They were of a mild type. The disease had been imported from the county of Durham.

Dr. YELD said that his district, Sunderland, continued to be in a good sanitary condition.

PATHOLOGICAL TRAY.

Mr. S. FIELDEN exhibited a very large fatty tumour, which he had removed, after death, from the body of a man, 70 years of age. The tumour sprang from the base of the neck; it was firmly attached to the deep structures in this region. The external carotoid artery was embedded in the deeper part of the tumour, and the sheath of the common carotoid was also closely connectd with the same part. The tumour had been first noticed after an attack of small-pox, when the patient was twenty years of age; he had, therefore, carried it for fifty years. The form of the tumour and its density were remarkable. It weighed eleven pounds. During life, it rested on the front of the thorax. Mr. Fielden had advised its non-removal. The tumour was found to be entirely composed of fat cells.

Dr. HOPGOOD exhibited:—

1. *Cystic Polypus of Uterus*.—Mrs. S., æt. 38, called on me on February 1st, and gave me the following history of her case. Five years ago, she had severe flooding, which lasted sixteen weeks, and as medicine did her no good, she kept to her bed for two weeks, when it gradually ceased. From this time she had more or less discharge, and every now and again severe hæmorrhage. About twelve months ago, severe pain came on suddenly while attempting to reach something from a height, after which, at times, she felt something come down. She consulted several medical men, who treated her with medicine, but she obtained no relief. During the last six months, every now and then, she says, there was a substance came down, which she replaced by pressing on it.

February 1st, 1875.—She consulted me for hæmorrhage, and as she did not wish to be examined then, I gave a mixture of ℥iii of liq. secali cornut with acid sulph. dil. Aq. ℥vi—a sixth part every three hours.

On the 3rd, she came again, and told me all hæmorrhage had ceased, and she wished me to examine her, which I did on the 6th, when I found a tumour in the vagina, the neck of which was as

thick as your thumb. It was of a dark red colour, hard to the touch, and bleeding easily towards the neck. I advised removal, but she did not seem willing.

She remained free from hæmorrhage, and on the 15th went, against my wish, to Edinburgh. After remaining there up till February 18th, she was seized with pain, the tumour passing beyond the vulva, and being unable to replace it, she determined to travel home, not wishing to place herself under another medical practitioner.

On the evening of the 18th, I was called to see her, and I found her in a very exhausted state, suffering great pain, the tumour being beyond the vulva, greatly congested, and a little blood proceeding from the upper part. Upon passing the finger beside the tumour, the neck of it could be easily felt to pass inside the os, and appeared to be attached to the right side, just inside the uterual os. With a little difficulty I returned the tumour into the vagina, and arranged to remove it the next day. Before leaving I gave her a morphia pill, $\frac{1}{2}$ gr., and ordered \mathfrak{z} i of castor oil.

February 19.—Chloroform having been administered, I siezed the tumour with the Vulcellum forceps to drag it down, and in doing so the neck separated, and it came away without any further difficulty. There was a little hæmorrhage, but it ceased on the application of cold water. On the third day she got up, and has remained well since. Menstruation commenced March 1st, and ceased on the 5th.

2. *Cancer of Uterus with pregnancy.*—Mrs. J., æt. 33, for some time an out-patient of the Sunderland Infirmary. When she first came under my notice, she complained of pain and great loss of blood from time to time. This was about a year ago. I then lost sight of her until April last, 1874, when she said she was pregnant, and that she suffered great pain; had considerable loss and was never entirely free from a discharge. I then lost sight of her until July, when, on July 12, I was asked to attend her in her confinement, which she thought had then commenced. I accordingly called to see her in the afternoon of this date, and found that she was having regular labour pains, attended with great suffering, and a slight discharge of blood and mucous of a most offensive nature. Upon examination, the anterior lip was greatly enlarged, and growing from it was a cancerous mass nearly as large as an orange, hard at the base, and easily bleeding upon examination with the finger. The posterior lip was free and dilated to the size of a five-shilling piece, the anterior somewhat dilated, but hard like a piece of board.

As there was very great pain, I decided to give large doses of opium, and repeat them frequently, which I did; \mathfrak{z} i of Tr. opii and \mathfrak{z} s acid sulph. dil. every three or four hours, until the pains were relieved, giving brandy as considered desirable, with eggs and good beef-tea.

Next morning the labour had progressed; she slept nearly the whole night, only waking up at each pain every half hour. In the afternoon I saw her again, and as labour was still progressing, I decided to continue the opium mixture. Next morning, the third of labour, I found that the os was dilated almost to the full size, I therefore continued as before. She was seen again about three o'clock in the afternoon, and the os was unchanged, a mass of the disease being in front of the head, and divided into two parts by laceration. but there was little hæmorrhage.

There were three modes of delivery which came to my mind—by craniotomy, by forceps or turning, and by giving ergot. I chose to try the latter first, as, should that be unsuccessful, then perforation or forceps could be applied afterwards. Also because it is a safeguard against hæmorrhage. At 3.30, I gave ʒij of the liq. ext. ergot. In about ten minutes pains became severe and constant, and in about one hour from the time of taking ill, she was delivered of a still-born child. The placenta had to be removed, as it was adherent over the entire surface. There was no hæmorrhage after the birth of the child.

The condition of the os was, after birth, as follows:—The posterior lip was soft and healthy, but the anterior, having the cancerous mass upon it, was smaller than before labour came on, and in the centre of it was a deep depression where the parts had been lacerated in the passage of the child's head.

She made a good recovery, and was much better than during time of carrying child. Upon examination, fourteen days after confinement, the tumour was reduced to about one-tenth its former size; there was less pain, and very little discharge.

Post-mortem on February 15th.—The abdomen was opened and the liver was found to be studded with cancer, the spleen also contained the disease, but the chief of the cancer was connected with the uterus, which, as you see, is greatly decreased, but on account of the disease having spread to the structures around it, could not be removed entire without a long and careful dissection, which time did not allow. I may remark that the placenta contained no signs of disease.

3. *Diseased Tarsal Bones*.—The patient, a boy, attributed the disease to a sprain. He consulted a bone-setter, who had told him the cap of the ankle was out. On September 1st, Dr. Hopgood found the ankle full of fluid. There was great pain. The foot was placed upon a splint and kept at rest for a month, and at the end of this time the swelling in the joint had almost disappeared, but a spot over the os calcis became tender, and an abscess formed, which was opened, and dead bone was detected by the probe. The foot, generally, was thickened. The boy was seen by two surgeons in Newcastle, who said the disease was local. Dr. Hopgood, and

three other surgeons who knew the history of the case, thought otherwise, and advised amputation. This was done. The specimen was a sufficient justification of the operation. It would be seen that the disease was very extensive. The boy's brother had died from similar disease, which had affected the meta-tarsal bone of the great toe, then the ankle, then the hip, and finally the spine.

4. *Acephalic Monster*.—J. S., aged 18, single, sent for me on February 13th, at 1.30 a.m., having been in labour since 6. Upon examination the os was fully dilated, but I could discover no presentation, I therefore determined to watch for an hour as the pains had almost left her. As a second examination gave me no evidence of the presentation, I ruptured the membranes, when about a gallon of liquor amnii came away. I now made a careful examination, but could discover no presentation; the finger passed inside the os, but it could be moved freely from side to side without coming in contact with the foetus. At each pain I made an examination, and after two or three, I came in contact with a soft pulpy mass, somewhat like a clot, but shortly afterwards I was able to feel the edge of bone. It passed readily through the brim, but as soon as it came to the pubic arch it was arrested, and at each pain the whole of the body seemed to be bending backwards towards the perineum. With great difficulty I managed to get my finger between the edge of bone and foetus and making a lever of it at the beginning of each pain, I succeeded at last in getting it over this difficulty, and the child was almost immediately born. The child was alive a few minutes before birth, but not afterwards.

Dr. MORDEY DOUGLAS said he had, some years ago, shown a similar case to the Society. The specimen was now in the Museum of the College of Medicine. In his case, at an early period of pregnancy, the mother of the foetus had been dragged down stairs by the hair of her head. This fact was interesting, and suggested the idea that there was some relation between this injury of the mother and the state of the foetus; in fact, that the condition of the foetus was the result of a maternal impression.

Dr. MORDEY DOUGLAS showed a piece of omentum from an old epiplocele. The patient, a gentleman in good circumstances, consulted him for a swelling in the groin. He had slipped while walking, and sprained himself. The swelling was of considerable size, and presented evidence of inflammatory action. There were no other symptoms. The swelling was in the position of a rupture. The diagnosis was difficult, for the patient had, twenty years before, ruptured himself, and had since worn a truss. Dr. Douglas made no diagnosis for a few days, and then, as there were no symptoms, he came to the conclusion that there was no bowel, but simply omentum. A professional friend saw the case with him, and thought

it was a tumour. The patient went up to London, and consulted Mr. Savory, who thought it a simple encysted tumour, and said that it would be easily removed. Dr. Douglas was not quite convinced until he cut into it; he then found that it was a tumour, the size of a turkey's egg, containing, as he had thought, omentum. Some parts of the wall of the tumour or sac were fully a third of an inch thick. The tumour was very moveable, except at its upper and posterior part. Cases of this sort are uncommon. It occurred on the left side, as is usually the case. The patient did well after the operation. There was a good deal of suppuration, but no abdominal symptoms.

Mr. HENRY E. ARMSTRONG exhibited two pieces of muscle from a forechine of beef. One was a transverse, the other a longitudinal section. They contained seven white bodies, cut transversely in the one case, and longitudinally in the other. The transverse section showed each body to be about one-eighth of an inch in diameter, having a central vessel. The longitudinal section showed the bodies to be about an inch and a-half in length. They differed from beef measles as usually described, in being neither encysted nor curled up. Beef measles was a remarkably rare disease in England, but was said to be more common in India and Abyssinia. It consisted of the presence among the fibres of the muscles of beef or veal of the *toenia medio cannellata* in its larval or non-sexual stage, and had been produced by feeding calves on the ova of that tapeworm. Received uncooked into the human intestinal canal, the measles became in time a full-sized worm. The speaker thought the specimen was probably one of "measles" more than usually developed.

Dr. PAGE: I should be much obliged, Mr. President, if the gentleman who has just shown a specimen of what he considers to be a "more than usually developed" example of beef measles would tell us why he considers it a specimen of that very rare disease at all. So far as I can learn, from what he has said, the appearances met with in the pieces of beef shown this evening are about as consistent with beef measles as the description once given in the French Academy of a crab was with a true description of those crustacians. A learned academician said a crab was a little red fish which walked backwards; whereupon Cuvier rose and explained thus: With three exceptions, the description was a good one. The three exceptions were, 1st, a crab was not a fish; 2nd, it was not red till it was boiled; and 3rd, it did not walk backwards. In the example of beef measles shown, Mr. Armstrong says the appearances "differ from beef measles as usually described in being neither encysted nor coiled up." In what respects do the appearances resemble beef measles, or differ from those presented by ordinary deposits of fat?

Dr. GIBB showed a small tumour which he had removed from the throat of a gentleman, who was suffering from troublesome cough, due to irritation of the growth. The tumour sprang from, and seemed to be, a greatly hypertrophied uvula.

Dr. GIBSON said he had met with a similar case.

Mr. MORGAN showed (1) the cast of an uncommon form of misplaced testicle—the testicle being placed between the thigh and the perineum. The patient suffered no inconvenience, hence Mr. Morgan had advised no interference. (2) A cast of congenital contraction of the palmar fascia; the tendons were also probably involved; the fingers were considerably flexed. The condition was congenital; there was no gouty or rheumatic history in the parents.

Dr. BEATSON showed two loose cartilages the size of small walnuts, which he had removed by two operations from the knee joint of a male patient. The joint was opened by a free incision under the antiseptic method, and one cartilage was removed. Subsequently, a second was discovered, it too was removed by the same means. During the second operation a considerable quantity of synovial fluid escaped. The patient made an uninterrupted recovery. In a few days after each operation the wound was healed.

ON BRONCHIAL HÆMORRHAGE.

By J. W. MACDONALD, M.B.

HÆMOPTYSIS is so frequently followed by serious results, that, from the earliest history of medicine, it has attracted the anxious attention of those who have devoted themselves to the study and treatment of disease. From the fact that it is so frequently the concomitant of tubercular phthisis, physicians fell into the belief that when bleeding took place, from the respiratory system, it gave an almost certain indication of the existence of pulmonary consumption.

Hippocrates expressed his celebrated theorem, “*epi aimatos emeto phthoe, kai tou puou katharsis ano.*” Lænnec’s teaching had a similar tendency; and Louis, having questioned all his phthisical patients, and having learned that they, at some time or other, had spat blood, came to the conclusion that pulmonary tubercle always bore to hæmoptysis the relation of cause and effect. These teachings and traditions have so influenced the minds of medical men that, to a great extent, the idea still pervades the literature of our profession. This has led to the conclusion that, as the seat of tubercular phthisis is in the lung tissue, hæmoptysis must necessarily proceed from the same locality; consequently,

the possibility of the air passages being frequently the seat of hæmorrhage has been overlooked. The theory of a bronchial origin of hæmoptysis has of late years found numerous advocates, particularly in Germany and France; but we find that text books by English authors have little or nothing to say about the matter, and by some the very existence of bronchial hæmorrhage is denied.

Acknowledging the frequency with which hæmoptysis is associated with phthisis, it is important that we should distinguish between those cases which do, and those which do not, point to degeneration of the lung tissue. This discrimination can only be arrived at by keeping in view the possibility that the bronchial mucous membrane is the seat both of tubercular and of non-tubercular hæmorrhage. And this conclusion may be arrived at by considering the following arguments:—

Firstly.—We find that other mucous surfaces are liable to attacks of hæmorrhage. Thus we have bleeding from the nasal cavities, the gums, fauces, stomach, intestines, uterus, and bladder, and it is only reasonable to suppose that the bronchial mucous membrane, which is almost identical with these in anatomical structure, should be similarly subject to hæmorrhage.

Secondly.—Cases are often met with, in which a previously healthy person is seized with alarming hæmoptysis, but completely recovers, and no sign of pulmonary disease can be subsequently discovered.

Trousseau says, “If I were to reckon up all the cases of pulmonary hæmorrhage which I have met with, in hospital and private practice, I believe that I should find that in the majority of cases the bleeding did not depend upon tuberculosis.”

Dr. Austin Flint, in a large clinical experience, has found many cases in which hæmoptysis was not followed by the signs or symptoms of tuberculous disease. An analysis of 386 cases of hæmoptysis, extending over 40 years, by Prof. John Ware (Publications of the Massachusetts Medical Society, 1860), showed that in 62 complete recovery took place, and the patients afterwards were known to be either living in ordinary health or to have been carried off by some other disease in no way connected with tubercle. This immunity continued from two to thirty-seven years. In 52 others, a similar complete recovery took place, and, so far as could be ascertained, there was no development of tuberculosis, but the entire history could not be traced.

Fuller, in his work on chest diseases, p. 255, says, “Three old medical friends of mine, lived for respectively 15, 25, and 40 years, after an occurrence, or rather repeated attacks of this kind, (hæmoptysis). A relation, who died at the age of 70, had had slight hæmoptysis at intervals, of from three to seven years, during his whole life after 17, yet not *one* of these was the subject of phthisis.

Andral relates the case of a young man who suffered from profuse hæmorrhage from the lungs, on four several occasions, between the age of 12 and 18, without any apparent detriment to his health, which remained excellent.

Mayo relates the case of a gentleman, 45 years of age, and in perfect health, who, 15 years previously, had two attacks of spitting of blood in one year, both seizures were preceded by a sense of constriction around the lower part of the chest. A year afterwards he spat blood a third time, in a violent fit of coughing excited by the smell of fresh paint. He had neither pulmonary nor cardiac disease, and his only complaints were occasional indigestion and irregular action of the bowels, which he attributed to the vegetable diet which he adopted for several months, after the spitting of blood. He was thin and spare, with a well formed chest, and a sanguine nervous temperament.—(Mayo's "Outlines of Human Pathology," Vol. 1, p. 449.)

Hodgkins says, "Blood is sometimes poured out from the bronchial membranes, causing as profuse hæmoptysis as that which takes place, in consequence of ulceration in phthisis, or from pulmonary apoplexy. I have seen such hæmorrhage, concurring with severe and fatal bronchitis. On inspection, neither tuberculous cavity, nor pulmonary apoplexy, nor recent pneumonia was detected, to introduce any doubt as to the bronchial source of the hæmorrhage.—(Hodgkins "Lectures on the Morbid Anatomy of the Mucous and Serous Membranes," Vol. 11, p. 65.)

Dr. George Johnston (in the "British Medical Journal," for 1870, p. 149), relates the following case: "About three years ago, I attended one of our former house surgeons with bronchitis. He had profuse hæmoptysis for several days in succession. I felt very anxious about him, but there were no positive physical signs of tubercular disease, and I always hoped and expressed hope. He completely recovered, and is now actively at work. I have seen several cases of the same kind."

About five years ago, I attended a man suffering from copious hæmoptysis, followed by dulness on the left side of the chest, corresponding to the root of the lung. After ten days the lung was restored to its normal condition, complete recovery took place, and up to the present time he has continued in perfect health. Considering the number of such cases which occur, we must conclude that phthisis is by no means so frequently the cause of hæmoptysis as is generally supposed.

Thirdly.—There is *post mortem* evidence of the occurrence of bronchial hæmorrhage. Trousseau mentions the following case occurring in the course of pneumonia. The blood gushed up and issued from mouth and nose. The patient, a girl æt. 13, died in five minutes. On *post mortem* examination, the stomach was found

filled with blood, but there was no lesion of that organ. The hæmoptysis was bronchial. The lungs were riddled with softened tubercles, and in the upper part of both there were extensive cavities. From both lungs, when cut into, a large quantity of blood welled out from the ramifications of the bronchial tubes. No ruptured vessel was found, and strange to say, the cavities themselves did not contain blood. The blood in the stomach was there simply because the hæmorrhage, being very great, had not sufficient way of exit by the mouth and nose, and was of necessity forced down the œsophagus. Here, then, is a case in which cavities are found in the lungs, and yet hæmorrhage takes place from the bronchi.

Sir Thomas Watson, while he rigidly adheres to the idea that hæmoptysis is almost exclusively dependant upon phthisis, thus describes the morbid anatomy of hæmoptysis occurring in persons who had previously evinced none of the symptoms of tuberculous disease, or at most of incipient tubercle. “In a far greater number of instances the blood in hæmoptysis is exhaled from the mucous membrane that lines the air passages, *for when this surface is examined in the dead body, and immediately after the occurrence of pulmonary hæmorrhage*, it is very often found to be perfectly entire from the commencement of the trachea to the remotest divisions of the bronchial tubes, as far, at least, as minute dissection can follow them. The membrane in these cases is usually red, as in simple bronchitis, but it is sometimes pale, or with scarcely any traces of vascularity. The former of these appearances results from the continued turgescence of the capillary vessels; the latter is the consequence of their having been completely emptied of blood by the last hæmorrhage.”

The morbid anatomy of hæmoptysis, in the earlier stages of phthisis, has never been satisfactorily explained. It is usually considered that rupture of the capillary vessels of the parenchyma within softening tubercular excavations is the cause of the discharge of blood, except in cases where a vessel of some size undergoes breakage (Walshe). This certainly is, to say the least, a probable explanation, when it can be shown that tuberculization has set in, but it requires, as an essential condition, the presence of tubercle previously to the hæmorrhage, and as I hope I have proved that cases of hæmoptysis do occur without tubercle, the explanation is useless. In cases of non-tubercular pulmonary hæmoptysis, the seat of the hæmorrhage must be either the capillaries of the parenchyma of the lung or the capillaries of the mucous membrane of the air passages. There is *post mortem* evidence that the latter is at least sometimes the seat of the hæmorrhage. No doubt the blood may come from the capillaries of either part.

Fourthly.—There is a class of cases, the symptoms of which cannot be accounted for in any other way than that the blood comes

from the bronchial mucous membrane. As an example of this class, take the following case:—

In January, 1872, I was attending a girl fifteen years of age. She was suffering from a slight cold which lasted only a few days. I examined her chest carefully during my attendance, and found it perfectly normal. A day or two after the examination, however, I was hastily summoned to see her, the messenger informing me that she was spitting large quantities of blood. This was on January 28th. The mother of the girl stated that at their last meal the patient had exhibited a most voracious appetite, and had eaten a large quantity of food. A few hours afterwards she felt something having a sweetish taste rise into her throat, and on coughing, a considerable quantity of blood came up. I made as careful an examination of the chest as the circumstances of the case permitted. There was no dulness over any part of the lungs. On the following day (January 29) the patient being in a state to warrant me in making a more complete examination, I found the following morbid signs:—A dull circumscribed area between the second and fourth ribs on the right side; bronchial breathing in the rest of the lung; no respiratory murmur at the seat of dulness.

The heart sounds were normal, pulse regular, 90 per minute. February 1st. The hæmorrhage has recurred once or twice, but she is much improved. The dulness over the right lung is less marked. No symptoms of pneumonia or pleurisy. February 3rd. The patient says she feels quite well, percussion over the affected lung is now nearly normal. February 20th. Percussion resonance is now perfectly natural, and the respiratory murmur normal in every part of the chest. She has to this day (January 14th, 1875,) enjoyed perfect health. It is evident in this case that the dulness occurred subsequently to the hæmorrhage, for I had carefully examined the chest a day or two previously and found no dulness whatever. I also found by examination, that it did not occur simultaneously with the bleeding. Whence then came the hæmorrhage? That it came from some part of the respiratory system there can be no doubt. It did not come from a cavity in the lung, for in that case there would have been evidence of the cavity at my previous examination, and the signs would have continued long after the hæmorrhage, which we have seen was not the case. It was not pulmonary apoplexy; for, 1st. The hæmorrhage was too great in quantity: 2nd. The dulness in that case would have been simultaneous with the bleeding, or even before it: 3rd. An extravasation to cause such extensive dulness, would inevitably occasion such serious injury to the lung texture, as to render complete return of the lung to its normal condition impossible: 4th. There was no cardiac disease to cause pulmonary apoplexy. Its origin was not in the walls of the alveoli, for in that case also, the dulness would have

been simultaneous with the hæmorrhage, and supposing such could take place, the injury to the lung texture would render so complete and rapid a recovery highly improbable. It did not arise from the trachea, for in that case both lungs would have suffered. In experiments upon dogs, cats, and rabbits, of which I shall afterwards speak, I invariably found that when blood was injected into the trachea it found its way into both lungs, and in no case did the left lung escape. For a similar reason, it is evident we can exclude all parts above the trachea. The bronchi are the only portions of the respiratory tract from which it could have arisen. It produced its effects on the right side, hence the blood must have come from the right bronchus.

ETIOLOGY OF BRONCHIAL HÆMORRHAGE.

Bleeding from the larger vessels of the bronchial mucous membrane, owing to wounds or ulcerations, is exceedingly rare. The slight hæmorrhage which occurs in bronchitis and catarrh are also unimportant, the blood being, as a rule, exceedingly small in quantity. There are, however, exceptions, as in the case of the student under the care of Dr. Johnson, to which I have already referred. In by far the majority of cases, the blood comes from the capillaries of the bronchial mucous membrane, owing to a weak and fragile state of the vessels. In some cases, the blood is exhaled through the walls of the vessels. The question of the possibility of this has been settled by Cohnheim, who saw the corpuscles make their way through unbroken capillary walls. In other cases, the walls of the vessels suffer rupture, and the blood escapes. This susceptibility of the bronchi to hæmorrhage has been spoken of by some authors as a form of hæmorrhagic diathesis. There can be no doubt, that in certain cases the vessels of the bronchi are predisposed to hæmorrhage, and this predisposition may or may not be associated with tubercle. The class of persons among whom this diathesis exists are usually of a nervous temperament, and, if females, subject to an abundant menstrual flow sometimes amounting to menorrhagia. They are usually young persons between the ages of fifteen and twenty-five, of delicate and weak constitution. Their growth has been rapid; they have become quickly tall without growing stout in proportion. They have been subject to bleeding from the nose or mouth, their skin is transparent, showing blue veins about the temples and edge of the nose, they are usually narrow chested, and have perhaps been the children of tuberculous parents.—(Niemeyer.)

As an example of hæmoptysis coincident with this kind of hæmorrhagic diathesis, Trousseau cites the following case:—“Among my old friends there is a lady, who is the mother of an eminent physician. During childhood she had fits of somnambulism, and even afterwards she was subject to nervous symptoms of the

most curious description. At present, she still experiences upon the slightest emotion, partial congestion of the skin, as is seen by its assuming a scarlet colour lasting some minutes. Up to the time when the catamenia ceased, she was subject to menorrhagic attacks which were often very alarming. When about thirty years of age, she had had such profuse hæmoptysis accompanied by so great an amount of dyspnoea, that my accomplished friend, Professor Andral, though unable to detect any signs of phthisis, judged it right to send her to the Eaux Bonnes. This lady has now emphysema of the lungs. Age has deadened the nervous excitability, which in her earlier life was manifested by the phenomena which I have described, and although her health is far from being so good as could be desired, she still looks fresh and plump. Neither she nor her children have any symptoms to lead to the belief that they have tubercles."

A somewhat similar case came under my own observation. A lady, now 63 years of age, informs me that in her youth she was of a delicate constitution, but never suffered from any serious illness until she arrived at the age of twenty-four, when, on awaking one morning, she felt a saltish taste in her mouth, and on coughing was terrified by the appearance of a large quantity of bright red blood. A considerable amount was coughed up during the next hour, which left her in a very weak condition. A hopeless opinion of the case was entertained even by the physician in attendance. By degrees she recovered strength, and enjoyed moderately good health. The hæmorrhage has never returned, although forty years have passed since its occurrence. She has not the slightest symptom of tubercular phthisis, and is the mother of a healthy grown-up family.

Although in the majority of cases, this hæmorrhagic diathesis is found in persons of delicate constitution and having the peculiarities already described, it is not entirely confined to that class. Sometimes the subject of it is a young person, apparently in blooming health, and of good constitution. Hæmoptysis in such persons is calculated to cause surprise, but the external evidences of general health do not preclude the possibility of inherent weakness in some part of the frame, such as the bronchi.

In persons suffering from tuberculosis there is a great tendency to hæmorrhage from the bronchial capillaries. On this subject, Niemeyer says: "The frequency of abundant hæmorrhage in all stages of these diseases (tuberculosis and consumption) arises partly because individuals who are liable to such bronchial bleeding are equally liable to tuberculosis, and consumption of the lungs, and because the tendency does not cease when the lungs become affected, and partly because deposit of tubercle and chronic inflammation cause the pulmonary tissues and bronchial mucous membrane to become relaxed, so that the capillaries which are imbedded

in the relaxed tissues (now no longer capable of resisting their undue dilatation) suffer excessive distention and attenuation of their walls, whereby they become more easy of rupture." We may, therefore, consider that the chief predisposing causes of bronchial hæmorrhage are:—

1st. A bronchial hæmorrhagic diathesis.

2nd. Tuberculosis and other forms of pulmonary phthisis.

Among the exciting causes are—

1st. Those which tend to diminish the capacity of the chest, and produce compression of its contents. Hence hæmoptysis is frequent in persons who sit constantly in a stooping position, as tailors and dressmakers; in young ladies who lace too tightly; and in persons with crooked spines. Dropsy, in a like manner, may act as a cause, and this has been frequently noticed in cases of ascites. Tapping has been found to relieve hæmoptysis, but on the fluid being allowed to reaccumulate the bleeding returned.

3rd. Certain cardiac lesions which cause pulmonary congestion, particularly mitral obstruction.

4th. Certain conditions of the blood and tissues, such as exist in scorbutus and purpura hæmorrhagica.

5th. Excessive muscular exertion, and particularly if the exertion be undergone in a rarified atmosphere, as in ascending high mountains.

6th. Suppression of menstruation.

CHANGES PRODUCED BY THE PRESENCE OF BLOOD IN THE ALVEOLI.

Blood cannot remain long in the bronchial tubes. A great part of it is, of course, driven upwards by the act of coughing, but part of it makes its way downwards, and enters the pulmonary air cells. This is owing to the gravitation of the blood, and the forced inspiration following each cough. Dr. Watson relates the case of a man who died of hæmorrhage from the lingual artery. On *post mortem* examination, the air cells of the lungs were found filled with blood. The same has been observed after death in the case of suicides who have cut their throats, and also after tracheotomy.

This is a point of the greatest importance, and as it, to a great extent, must influence the prognosis and treatment of bronchial hæmorrhage, I shall next proceed to consider the changes produced by the presence of blood as a foreign substance in the pulmonary alveoli. In investigating this subject, I have made numerous experiments upon dogs, cats, and rabbits. Some of these experiments I shall briefly describe.

Expt. 1.—I opened the trachea of a small dog, and injected about two drachms of blood taken from its own body. The dog was killed five hours afterwards. In both lungs, near their roots,

bright patches were observed, and the air cells at these places were found to be filled by the injected blood. The blood penetrated farther into the left lung than into the right. (Fig. 1.) On microscopical examination, I found in the alveoli containing blood large oval cells about three times the size of red blood corpuscles. They were pale, with a dark border, granular contents, and each had a distinct nucleus. (Fig. 2.)

Expt. 2.—I operated similarly on a rabbit, and killed the animal twenty-four hours afterwards. The injected blood had found its way almost exclusively into the left lung. On examining a section taken from one of the patches, I found cells similar to those in the preceding, but they were more numerous.

Expt. 3.—A full grown cat was killed three days after being operated upon, as in the case of the other animals. The blood was found to have penetrated to the air vesicles as before, but the patches were much less marked. The large cells appeared more distinct and more numerous. Their contents were less clear, and the neuclei not so well defined.

Expt. 4.—A medium-sized dog, killed 22 hours after operation. The lungs were almost black, partly owing to the injected blood and partly to a pigmentary deposit. The bronchial glands were also filled with pigment. The microscopical examination revealed a few cells similar to those in Fig. 2.

Expt. 6.—A full-sized cat, under chloroform, the trachea opened and about three drachms of blood injected. Immediately afterwards the animal appeared suffocated and suddenly stopped breathing. After employing artificial respiration it was soon restored, but great difficulty of breathing continued for a few hours afterwards. At the end of four hours it was killed by bleeding. The lungs showed the coloured patches, and microscopical examination showed very few pale cells.

Expt. 7.—A cat, which had been operated upon a month previously, was killed by cutting its throat, so that a quantity of blood got into the trachea. It reached the lungs in large quantities, and after death the bronchial tubes were found full of it. The coloured patches were the same as those previously described, the blood, as usual, penetrating the left lung more than the right. In the parts of the lung which were not occupied by the blood drawn in just before death, a faint darkish or bluish tint could be seen. The microscopical examination showed nothing unusual.

Expt. 18.—A small cat was operated upon under chloroform, and three drachms of its blood injected into the trachea just as the anæsthesia was passing off. The breathing immediately became impaired, and short asthmatic-like respirations continued for about twenty minutes. It seemed very uneasy, and tried to conceal itself by creeping into a corner of the room. Five days afterwards, it was

Fig. 3.

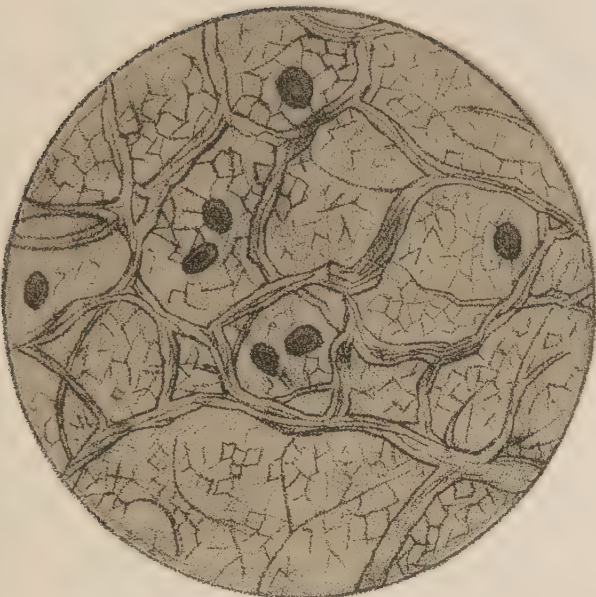


Fig. 1.

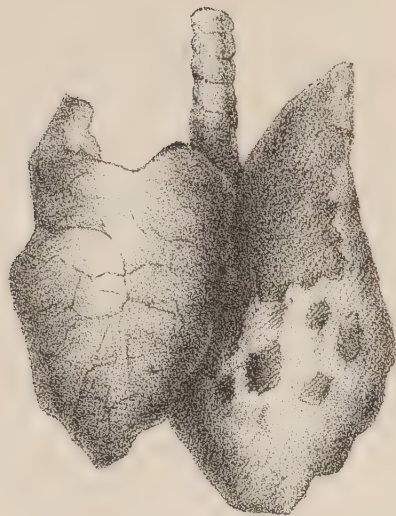


Fig. 2.



killed by opening one of the carotids. As the windpipe was also cut, a quantity of the blood was drawn into it. The lungs presented bright and dark patches, the dark shading off to the natural colour of the lung. A section of the bright patches showed that they were caused by the freshly inspired blood, and microscopical examination revealed the blood corpuscles in their natural condition. The pale patches were undoubtedly due to the blood injected five days previously. Under the microscope the alveoli were found almost completely filled with the large cells. They seemed to have reached their full development. They were tinged by an ammoniacal solution of carmine.

Expt. 20.—A small dog, into whose trachea about half an ounce of blood had been injected, was killed seven days after the operation. The cells were not nearly so numerous, and appeared to have become shrivelled. (Fig. 3.)

Expts. 25th and 26th.—Cats were used, and killed respectively eight and nine days after having been operated upon. The cells seen under the microscope in the alveoli were very indistinct, more especially in the case of the animal killed on the ninth day.

I always failed to find any in animals killed on the tenth day after having been operated upon.

Colberg, in describing the microscopical anatomy of catarrhal pneumonia, speaks of large spheroidal cells with a vesicular nucleus, and which increase rapidly until they fill up the alveoli. The cells, as figured by him, bear so close a resemblance to those I have described as to leave no doubt but that they are identical. We may, therefore, assume that these appearances are due to catarrhal pneumonia. The large cells are epithelial elements derived from the walls of the alveoli, in which an inflammatory action has been set up by the irritation of the blood acting as a foreign substance.

From these experiments I conclude—

1. That blood readily enters the *air vesicles* from the bronchi.
2. That the roots of the lungs are the parts most generally affected, and in particular the root of the left lung.
3. That the presence of the blood has a tendency to set up irritation sufficient to cause a morbid action in the vesicles.
4. That proliferation of large cells is characteristic of the lesion.
5. These begin to appear about two or three hours after the extravasated blood reaches the alveoli. They are then pale, with a distinct nucleus, granular contents, and are about three times the size of red blood corpuscles. They increase in number and size until the fifth or sixth day, when the alveoli are almost completely filled by them. They then become shrivelled up, and a process of disintegration follows. By the tenth day they have disappeared.
6. The cells are the result of catarrhal pneumonia.

During the course of these experiments I noticed in the "British Medical Journal" that Dr. Julius Sömmerbrodt, of the University of Breslau, had made experiments of a similar nature. I communicated with him, and sent him some of my drawings. He very kindly informed me that they entirely corresponded with the results of his own investigations.

This is the course of events when the blood produces a certain amount of irritation in the air cells, and we consequently have the symptoms of pneumonia coming on a few days after the hæmoptysis, a point to which Niemeyer calls particular attention, and one which he says is frequently overlooked. But blood does not in all cases produce so much irritation as to cause pneumonia. In the case of the girl already mentioned, I watched with the greatest care for symptoms of it, but none ever appeared. I, therefore, assumed that the blood was partly absorbed and partly expectorated without producing any appreciable irritation. Trousseau and Leblanc made experiments on horses, which prove the power of the pleura in getting rid of blood poured out into its cavity. They found:—

1. That the blood coagulates as soon as it is poured out.
2. That it there excites only a very moderate amount of irritation.
3. That it is very rapidly absorbed.

When they injected 200 grammes of blood, or when an intercostal artery was opened, there was, as a rule, no trace of it after forty-eight hours, or at the most, a little bloody serosity. If 500 grammes were injected, only a small clot was found; after three days, more than four-fifths of the fluid were absorbed. Even when the quantity injected amounted to from one to three kilogrammes, more than one half of it had disappeared at the end of forty-eight hours; and at the end of the third day only a small clot and a little bloody serosity could be seen. *Throughout these experiments they did not find the least trace of inflammation of the pleura.*

Now, although we cannot say that the action of the alveoli, filled with blood, must be the same as that of the pleura, under similar circumstances, still from the fact that the lungs, like the pleura, are abundantly supplied with absorbents, we may safely conclude that part of the blood *may be absorbed*. And as in many cases, the patient, after expectorating small masses of clotted blood and bloody mucus, makes a rapid recovery, there can be little doubt that a great part of the blood is expectorated. The air cells are thus left unimpaired.

SYMPTOMS.

Hæmoptysis has usually some premonitory symptoms. In many cases the attack is preceded, for a few days or hours, by a sense of constriction or feeling of heat or weight at the chest, pain between the shoulders, dyspnœa, and palpitation. There is another circum-

stance which so frequently occurs, as an antecedent to hæmoptysis, that I cannot help regarding it as a premonitory symptom, not only of bronchial but of other forms of hæmorrhage. I mean a sort of *resistless craving appetite for food or for some particular article of food*. In the girl, whose case I detailed at the beginning of my paper, this was well marked. Two hours before the hæmoptysis came on, she surprised all her friends by eating an immense quantity with a voracious appetite. Trousseau relates the case of a woman (æt. 62), who died of intestinal hæmorrhage during the course of typhoid fever. On the afternoon of the 14th or 15th day, his chef de clinique saw her taking meat soup with appetite, and complaining that it was insufficient in quantity. Three hours afterwards abdominal hæmorrhage set in so profusely that the blood inundated the bed, and flowed over the floor of the ward. In less than an hour the patient was dead. In view of the number of cases in which I have observed this in my own practice, and seen it recorded in the writings of others, I think it is well worthy of mention as a premonitory symptom.

The attack of bronchial hæmorrhage is ushered in by the patient feeling a saltish fluid rise into his throat, and on coughing he finds it is blood. The amount discharged may vary from mere specks to several pints. When the quantity is large, it trickles down the bronchial tubes, and driving out the air, fills up the air cells to which it finds access. Consequently, the lung at that part gives, on percussion, a dull sound, no respiratory murmur can be heard, but around the part there is bronchial breathing. In those parts of the air tubes which are only partially filled with blood moist rales will be heard, caused by the air passing through the fluid. We have already seen that after the blood has reached the alveoli, one of two results may follow. 1st. The irritation of the blood may produce catarrhal pneumonia. 2nd. The blood, without producing any irritation, may be partly absorbed and partly expectorated, leaving the air cells unimpaired.

PROGNOSIS.

The prognosis of bronchial hæmorrhage must be given with great caution. There is seldom a single attack; the first bleeding is generally followed in a few hours by a second or third, and it is well to give the patient warning of this. When the quantity of blood is apparently small, and no signs of it having entered the air cells of the lung are present, then we may expect little evil to result. If, however, the quantity of blood expectorated be large, and a considerable extent of dulness exist, catarrhal pneumonia will probably set in in a few days, or, in favourable cases, the blood may be partly absorbed and partly expectorated, and the dulness entirely disappear. Niemeyer says, "The most frequent termination by far of this consecutive inflammation is resolution. The symptoms often

vanish in a few days, and the patient becomes completely convalescent."

That complete recovery from this form of hæmorrhage takes place there can be no doubt. We can find innumerable instances of patients who after it regain their health completely—indeed, often live to an advanced age—and after death present no discoverable traces of extinct tuberculosis.

The production of tubercular phthisis by hæmoptysis has been readily received as a sort of axiom from a very remote date. It must be admitted that the views of physicians upon this point have until recently been narrow and prejudiced, and that conclusions have been too hastily arrived at. A person in good health has an attack of hæmoptysis: in a few weeks or months signs which might be attributed to phthisis set in, and hitherto practitioners have too frequently fallen into the error of considering this disease pulmonary tuberculosis.

Tuberculosis is a general disease, and the lung affection is only a local manifestation of it. Now, hæmoptysis must either produce the general disease tubercle, or produce simply a local disease in the lung. That it acts upon the lung locally, and almost immediately, clinical facts prove, and it has been shown that the changes produced are due to catarrhal pneumonia resulting from the irritation of the blood in the alveoli. Catarrhal pneumonia often leads to chronic interstitial pneumonia, and as this disease has been constantly mistaken for phthisis, it is more than likely that the cases which have hitherto been classed under the designation of phthisis ab hæmoptœ are not examples of tubercular phthisis, but of chronic or interstitial pneumonia. Niemeyer thinks it a special form of phthisis. He says:—"Unbiassed and careful observation of patients, who without warning, and often in the midst of exuberant health, have been attacked by pneumorrhagia or hæmoptysis, and who without rallying have perished in a few months of a phthisis florida—a galloping consumption—has taught me that such patients scarcely ever succumb to a pulmonary tuberculosis in its stricter sense, but that they usually die of a form of consumption as yet but little thought of, and of which bronchial hæmorrhage is the immediate cause."

TREATMENT.

As much of the evil resulting from bronchial hæmorrhage is due to the blood finding its way into the air cells, one great aim in our treatment must be to prevent that occurrence. Without putting the patient to unnecessary inconvenience, we should ascertain with the least possible delay whether dulness exists over any part of the lung. When any dulness exists, the patient should be directed to lie upon the sound side. The blood will thus have a tendency to gravitate into the trachea from the bronchi, rather than from the

bronchi into the pulmonary alveoli. Unfortunately, in most cases the mischief has taken place before the physician can make out which side is affected. Under any circumstances, the patient should lie quietly in bed.

Very many drugs have from time to time been employed. Dioscorides recommended theriacum, a compound containing no fewer than sixty-six ingredients; one of these was turpentine, to which it perhaps owed its efficacy; and we are informed that on one of the tablets of the Sanatorium of Cos, an account is given of the wonderful cure of Julian, who, while in a hopeless state from an attack of spitting of blood, was ordered to come and take a pine cone from the altar, to mix it with honey, and for three days in succession to eat a portion of it. In modern times, all sorts of astringents have found favour, particularly gallic acid, acetate of lead, alumen exsiccatum, tannate of alumina, &c. Sulphuric acid and opium have been found valuable, and digitalis is recommended in cases where there is obstruction in the right heart (Rogers). Dr. G. W. Balfour employs hypodermic injections of ergotin with some success. Ipecacuanha has been much used in France, and Trousseau speaks very highly of it. It is given in large doses, and its benefits are best seen when it produces vomiting. In October, 1869, a great many cases of hæmoptysis occurred in the Paris Hospitals, and doses of 4 grammes (61·7 grains) of ipecacuanha were given with very good results.

For our knowledge of the physiological action of this drug, we are indebted, principally, to M. Bretonneau, of Tours. He found that when the powder was placed in contact with the skin, stripped of its epidermis, it produced a considerable amount of local inflammation. A small quantity blown into the eye of a dog caused ulceration, and even perforation of the cornea. He proved, in fact, that ipecacuanha is a local irritant, and that its emetic and purgative properties are due to inflammation produced by it upon the gastro-intestinal mucous membrane. Hannay, of Glasgow, at a more recent period, guided by the experiments of Bretonneau, made an ointment, containing 8 grammes of powdered ipecacuanha, 8 grammes of olive oil, and 15 grammes of lard, which for ordinary external use can take the place of croton oil. When given internally, and brought into contact either with the stomach or rectum, it produces local inflammation, which is demonstrated by *post mortem* examination, an inflammation much more intense than can be imagined when we bear in mind the apparent harmlessness of the remedy.

But the irritant action of ipecacuanha, besides the production of vomiting and purging, has more remote effects. It has an action upon the sympathetic nerves, and through them upon the muscular system. The stomach receives its nervous supply from the pneumo-

gastric and numerous branches of the sympathetic, offsets from the solar plexus. The influence of the sympathetic system of nerves upon the blood vessels is a well-established fact. Claude Bernard found that, by the application of a weak electric current to the peripheric end of the divided sympathetic, the capillaries rapidly contracted, a diminution of temperature simultaneously occurred, and secretion diminished. On the application of a stronger current, circulation was entirely arrested, so that under the microscope the capillaries seemed to be completely emptied. This is the key to the action of ipecacuanha: no sooner does the drug come in contact with the stomach, than the terminal branches of the sympathetic connected with that organ receive a stimulus. This stimulus is conveyed to the solar plexus and splanchnic, and is thence reflected upon the sympathetic generally; in consequence, the blood vessels, more especially the capillaries, contract, and hæmorrhage from them is arrested. It is simply a reflex act.

Ipecacuanha only possesses the property of arresting hæmorrhage in common with other emetics. The whole class of emetics are, therefore, hæmostatics; we might call them reflex hæmostatics.

From the experiments of Pecholier, we learn that when ipecacuanha, or better still, emetine, is given to rabbits, there follows a diminution in the number of respirations, the temperature is lowered at the surface of the body, but slightly elevated in the rectum, and the lungs become remarkably anæmic.

Dr. Sydney Ringer's work on Therapeutics contains the following statement:—"In flooding after delivery, Higginbottam recommends ipecacuanha in a quantity sufficient to produce vomiting, and ascribes to this effect its great efficacy in arresting the hæmorrhage. In his hands the treatment has been successful in the most desperate cases of flooding. It may well be doubted, however, whether beyond its emetic effect ipecacuanha exerts any influence over uterine hæmorrhage, zinc would probably answer equally well. Dr. George Budd tells me that he once witnessed, in the case of a Syrian Jewess, the prompt suppression of flooding by her attendant, who crammed down the patient's throat a handful of her hair. Probably the mechanical excitation of vomiting would prove useful in flooding."

It is not the act of vomiting, however, which is the essential element. Hæmorrhage is arrested by irritation to the stomach falling short of producing vomiting. That is, an irritant which is not sufficient to produce vomiting will cause contraction of the capillaries. A person may say, "I feel sick," may turn deadly pale, but may not vomit. And who among us does not recollect the ghastly whiteness which in schoolboy days stole over the faces of his comrades in their first attempts at using tobacco?

I have scarified the mucous membrane of a dog's mouth, and found that it continued to bleed for about four or five minutes. I

have then given a dose of ipecacuanha sufficient to produce nausea, and found that with equal scarification blood could with difficulty be brought, and at most the bleeding lasted only about a minute and a half.

Dr. Wharton Hood relates two cases of hæmorrhage from the tonsil after the excision of that body. In the first of these, bleeding went on for several hours, resisting the action of styptics of various kinds. The patient suddenly felt sick, and vomiting followed, after which it was found that the bleeding had completely stopped. The second case was one in which slight bleeding had gone on from one p.m. to three, when the patient found that after taking some food, the hæmorrhage increased to such an extent as to alarm him.—(*Lancet*, 1870, vol. 2, p. 600.)—An emetic of sulphate of zinc produced retching, and completely arrested the hæmorrhage. Dr. Hood is of opinion that the arrest of the bleeding was due to pressure upon the tonsil during vomiting by the contraction of the pillars of the fauces and the surrounding muscles; but if this were the case, we would expect to see the bleeding return whenever the action of vomiting ceased, for the pressure can only exist for a very short time. Further, when the action of vomiting is excited by tickling the fauces, it is seen that the tonsils approach each other; but I have never been able to make out that they were pressed by the pillars of the fauces. The bleeding was stopped, I believe, by the reflex action of the irritant in the stomach. Ipecacuanha is beneficial in the early stages of tonsilitis, of course when the blood vessels become over-distended, and the inflammatory action passes beyond the stage of congestion to that of stasis, the drug is of no use.

One advantage in using emetics for stopping hæmorrhages is that they are always within reach in emergencies. Warm water can be obtained at a few moments' notice, and, if need be, mustard can be added. Thus a person attacked with spitting of blood, can take an emetic and check the attack long before a messenger can find a doctor. A person who is subject to inflammatory sore throat, can ward off an attack by taking a dram or two of ipecacuanha wine. The prompt administration of some mustard and water might be the means of saving life in the case of flooding after delivery.

Everybody will admit that astringents are attended with one great disadvantage, they are followed by constipation.

Dr. Waters (*British Medical Journal*, March 2, 1871), thus cautions us in using opium:—"It is well to bear in mind its tendency to confine the bowels, for in treating persons who are very weak from hæmoptysis, you have great trouble in getting the bowels opened, and the efforts to move them may reproduce the bleeding." I have very frequently administered ipecacuanha, and with unvarying success. It should have a fair trial at least in every serious case where other means have failed. It is more certain in its action than astringents, more speedy, and free from their disadvantages.

Dr. Stevenson Macadam, of Edinburgh, once told me of an American who came into his laboratory with a small vial, the contents of which he wanted to have analysed. He said he had been buffalo hunting on the Western prairies, and having been seized with an alarming attack of spitting blood, was taken into an Indian wigwam. They gave him this substance to smoke among his tobacco. It was nearly gone, and he was anxious to have it replaced. It proved to be Canada Balsam. A year afterwards, the American again entered the laboratory. He had been all over the Continent; the bleeding had frequently returned, but by using the Canada Balsam among his tobacco, each attack was speedily checked. He had just returned to London, and took a run up to Edinburgh to tell the doctor that he "guessed he was all right" in that analysis.

From the foregoing, I conclude—1st. That hæmorrhage from the bronchial mucous membrane, both of tubercular and of non-tubercular origin is very frequent.

2nd. When blood escapes from the bronchi in any large quantity, there is great danger of its reaching the air vesicles. It occupies those near the root of the lung, and is sometimes sufficient in quantity to cause dulness on percussion.

3rd. The presence of extravasated blood in the alveoli may be followed by one of two results.

(a) It may in a short time disappear, partly by absorption, and partly by expectoration, without having produced any appreciable effect.

(b) It may excite catarrhal pneumonia.

4th. Catarrhal pneumonia thus excited may terminate favourably by the ninth or tenth day, or it may proceed to a fatal termination, the disease in this case being chronic pneumonia, and not tubercular, or the so-called phthisis ab hæmoptœ.

5th. That ipecacuanha and other emetics in this and many other forms of capillary hæmorrhage have a good effect, and that their action is due to stimulation of the sympathetic nerves, which by virtue of their vaso motor function cause the capillaries to contract.

Dr. MORDEY DOUGLAS said that Dr. Higgenbottom, of Nottingham, had strongly advised the use of ipecacuanha in similar cases. Ergot had been also strongly recommended. He had used it in a few cases, but had not had sufficient experience to give a decided opinion on its effects.

NOTES ON A CASE OF STAPHYLORAPHY.

By W. C. ARNISON, M.D.

T. B., aged 8 years, was the subject of a somewhat unusual form of malformation. Hare-lip and fissure of the hard and soft palate, the fissure in the palate not being, as it usually is, continuous with that in the lip, but stopping short behind the alveolar process, which was entire.

He first came under my notice as a baby, when I assisted my brother, whose patient he was, to close the hare-lip, and in July, 1874, he was admitted under my care into this Infirmary, in order to have the fissure in the palate closed by operation. I did not decide positively before operating how much I should endeavour to accomplish, leaving that rather to be determined by circumstances at the time, but I thought it probable that I would endeavour to close only the posterior portion.

Operation, July, 1874.—The boy was put under the influence of chloroform, and a thread passed through the uvula on each side, which, being held in the fingers, served to steady the part during subsequent steps of the operation, the sides of the cleft in the palate and uvula were then freely pared, through about the posterior two-thirds of their extent. An incision was then made on each side, parallel to the dental edge of the gums, leaving the anterior and posterior connection of the soft structures intact, so as not to interfere with vessels and nerves. The incisions were carried down to the bone, and the soft structures and periosteum were carefully peeled off the bony palate. With the points of the bifid uvula put on the stretch, by means of the threads introduced at the beginning of the operation, the levator and tensor palati on each side were divided through the incision; the knife being applied until it was felt that all muscular resistance had ceased, and that the two sides of the palate were perfectly flaccid. After bleeding, which throughout every step of the operation was very copious, had been stopped by ice, sutures were applied, by means of a curved needle set at a right angle with the handle, armed with a thread, and passed through both sides at once, the thread being seized with forceps and the needle then withdrawn. When the sutures had been secured, it struck me that two threads passed round the flaps loosened from the bony palate, would hold the parts together, and so take off tension from the sutures, and this was done with manifest advantage, but the benefit of this plan was much lessened by the two threads immediately falling together, and this led me to devise a plan for keeping them apart at the second operation.

The boy did well for thirty-six hours, when profuse bleeding took place, so profuse as to place even his life in jeopardy, and I

was prepared to open up the wound and sacrifice the operation, if necessary, in order to save his life, but the bleeding, fortunately, ceased, and the case did well; union was perfect throughout the whole extent of the operation, except a small opening in the middle, which ultimately closed by granulation. The boy went home, and, after a few weeks in the country, had quite recovered from the effects of loss of blood. He was again admitted under my care.

Second Operation, October, 1874.—There was now only an opening, about half an inch in length, passing through the anterior part of the hard and soft palate. The operation was done in the same way as at the first, minus the division of muscles. The edges were freely pared, the soft structures, including the periosteum, peeled off the bony palate, and sutures fixed as before. I then introduced a very small silver plate, about half an inch in length, and 1-8th of an inch in breadth, which I had had made for the purpose of keeping apart the two threads, which embraced the flaps loosened from the bony palate. This plate is furnished with five minute holes—two pairs, $\frac{1}{3}$ inch apart, with a single hole at one end—a thread was passed through each of the two pairs of holes, and a thread also through the single hole. By a little manipulation the plate was drawn above the two flaps, in such a manner that the two threads which embraced the flaps could be tied in the mouth, and the single thread was drawn out at the nostril, and fixed to the cheek by plaster. The rough gutta percha model which I have prepared will make this more clear than any description. The result was perfectly satisfactory; union took place perfectly, the sutures were all removed in less than a week, and a day or two afterwards the embracing thread was divided, and the little silver plate drawn out through the nostril.

Before the boy left the hospital, I cut into the sides of the soft palate, as recommended by Mason, so as to make a sort of artificial uvula, with the object of preventing the passage of air through the nostrils, and so lessening the nasal tone of the voice.

The result of the operation, so far as regards the closure of the fissure, could not be more perfect; as regards any improvement in the voice, it is not so satisfactory. There is an improvement, but it is very slight. The voice still passes, in great part, through the nostrils, so that the nasal twang, though less than before, is still very evident. He seems to fail most in the dental and palate sounds. Whether it be entire disuse of the practice of placing the tongue against the roof of the mouth in speaking, or some other cause, I do not know, but he seems to find it impossible to raise the tongue to the roof of the mouth. When I have told him what to do, and shown him myself, he simply rolls the tongue clumsily on the floor of the mouth, without making the slightest attempt to elevate

its tip. There is, however, just so much improvement, that I am in hopes that, with careful teaching and practice, and perhaps some knowledge of the mechanism of speech, he may ultimately be able to speak in a more intelligible manner.

Dr. GIBB said he had seen a similar case, a few days ago, at West Hartlepool, which had been operated on by Sir William Ferguson. The result was not so successful as Dr. Arnison's, where the opening was completely closed.

Mr. SHIELD said it was possible to fit a plate of silver or some other substance; by this means the voice was made more natural. In some cases this answered quite as well as operative procedure.

Dr. GIBB said by closing the opening with a probe, it was often possible to make the patient articulate correctly.

Dr. ARNISON said it was advisable, if possible, to restore the parts to the normal condition; this could only be done by means of an operation, and, if successful, an operation was much to be preferred to a silver plate. The operation in this case had completely closed the orifice, but the boy still articulates badly, partly owing to the fact that he does not attempt to raise the tongue from the floor of the mouth. There is, therefore, hope of still further improvement.

REPORT OF A CASE OF LYMPHÆMIA.

By G. H. PHILIPSON, M.A., M.D., Cantab; F.R.C.P., Lond.

RALPH M., aged 40, a tobacco pipe maker, resident in Gateshead, was entered as an out-patient at the Newcastle-upon-Tyne Infirmary, under my care, July 9th, 1874.

He stated that he had been in weak health for five years; that he had been aware of a swelling in his abdomen for two years; that for the past six months his breathing had been hurried, and that he had been rapidly losing strength, having suffered from epistaxis, sickness, and diarrhoea; and that for six weeks the right side of the neck had been swollen. He also complained of fleeting abdominal pains.

Upon interrogation, he admitted to having had syphilis fifteen years ago, and to having lead a very dissolute life.

Upon examination, the abdomen was enlarged, visibly so, the left side. Upon palpation, the left hypochondrium was found to be occupied by a hard tumour, which was dull upon percussion. The dulness extended nearly to the middle line in front, and from the sixth interspace to two inches below the umbilicus. The anterior border was sharp and hard, and was distinctly notched. The tumour

felt near the surface, but was unable to be moved, yet the hand could be passed behind it. Its position remained unchanged in forced inspiration and expiration.

The blood was examined microscopically, and it was found that there was a considerable diminution of the red globules, and an increase of the white.

The tumour was regarded as an enlarged spleen, the diagnosis being based upon its position, its nearness to the surface, its sharp and notched anterior border, and the ease with which the hand could be passed behind it. It was surmised that the organ was bound to the abdominal wall, which would explain its immobility.

He was advised to enter the Institution, but declined. He was ordered to take iodide of potassium internally, and to rub the compound iodine ointment over the enlargement of the neck and the swelling in the abdomen.

August 2.—He was made an in-patient. He was greatly emaciated, and very anæmic; the lips and conjunctivæ were almost white, while there was a peculiar fawn or orange tint about the eyelids. The pulse was 106, and the temperature 104.4° F. The face and head were considerably swollen from œdema. The right leg was œdematous. The lymphatic glands, in both sides of the neck, both axillæ, and both inguinal regions, were enlarged and hard.

Upon examination of the abdomen it was found that the tumour extended fully three inches to the right of the umbilicus, upwards as high as the sixth inter space, and downwards within two inches of Poupart's ligament. There was distinct fluctuation in the abdomen. No bruit was heard, upon auscultation over the tumour.

The heart's impulse was visible about half-an-inch within the left nipple and in the nipple line. The heart sounds were feeble, but without murmur.

Upon examination with the ophthalmoscope, it was noted that the optic discs were normal, but that the fundus was extremely pale.

The urine was of s. g. 1028, and contained albumen, but no blood corpuscles, pus cells, or casts of the uriniferous tubules.

He was ordered a generous diet, wine, and the tincture of the perchloride of iron.

September 2—From time to time he has suffered from diarrhœa, which has been restrained with the chalk mixture and catechu, and the compound powder of ipecacuanha.

He gradually became weaker, and died on September 20th.

Autopsy, 45 hours after death. The peritoneum contained a small amount of clear yellow serosity. The spleen was adherent to the abdominal wall, the left lobe of the liver and the fundus of the stomach, by old and firm adhesions. The surface of the organ was slightly uneven and indented by the ribs. It measured 12 inches in length, 9 inches in breadth, was 3 inches thick, and weighed

7½ lbs. Upon incision, it presented a mottled appearance, was reddish brown in colour, very firm and tough, and was not impressed with the finger. Microscopical examination showed the normal elements, only they were more closely packed together. The increase appeared to be owing to proliferation of the cell elements.

The liver was not adherent to the abdominal wall, was smooth on its surface, and upon section was of fair consistence, and a little pale in colour.

The kidneys were enlarged, the right measured 5½ inches in length, and 3½ inches in breadth. The capsules were easily recognised, the exposed surface being pale and smooth. On section, the cortical portion was increased, at places to half-an-inch in thickness.

The supra-renal capsules were large, the right measured 2¾ inches in length, and 1½ inches in breadth.

The mesenteric and lumbar glands were enlarged, the largest being fully half-an-inch in length.

The pericardium and pleuræ contained clear yellow serosity.

The heart was small, and loosely contracted. The muscular tissue was pale and soft. The valves were normal. The coagula were greyish, and, when examined microscopically, were found to be composed entirely of colourless blood cells.

The lungs were emphysematous, especially at the anterior and lower borders. There was no tubercle.

The bronchial glands were enlarged.

The thyroid gland was not larger than usual.

The glands, in both axillæ, in both inguinal regions, and on both sides of the neck, were enlarged. The largest gland in the right inguinal region, measured 3 inches in length; on section, the glands were pale, mottled, and were soft and watery looking. The cortical substance was particularly swollen, in some to the thickness of half or three-quarters of an inch. The microscope showed that the increase was entirely due to an excessive formation of cells, nuclei and granules, similar to those of the normal glands.

REMARKS.

The interest of this case is the association of the enlargement of the spleen, with the enlargement of the lymphatic glands, peripheral and central, and with the condition of the blood, designated leucocythæmia or leukhæmia, in which the white corpuscles are in excess.

The anatomical characters of the lymphatic system, however, being so markedly predominant, the case has been recounted under the title of Lymphæmia, as a more appropriate term than leucocythæmia, the latter being regarded as expressive of the condition of the blood alone, and not necessarily associated with hypertrophy of the spleen or other blood glands.

The abdominal tumour, from its immobility, if the physical signs had not been carefully interpreted, might have been regarded as an enlarged left kidney and not as an enlarged spleen. The supposition of its fixation being clearly verified at the autopsy. The tenseness of the adhesions indicating old localised inflammation of the peritoneum, in the neighbourhood of the spleen.

Dr. EASTWOOD said he had listened with great interest to Dr. Philipson's paper. He (Dr. E.) saw the first case which had been described in this country. It occurred in the Edinburgh Infirmary. It was observed and recorded by Professor Hughes Bennett.

The business of the meeting not being concluded, it was resolved that the meeting be adjourned for a fortnight, and the discussion on Dr. Macdonald's and Dr. Philipson's papers take place at the adjourned meeting.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

AN adjourned meeting of the Society was held in the Library of the Infirmary. on Thursday, 25th March, 1875—the President (Mr. Broadbent) in the chair.

The following gentleman was elected a member of the Society :—

Jos. F. Armstrong, M.R.C.S., South Shields.

The following gentleman was proposed for election :—

Edward Jepson, M.R.C.S., Durham.

PREVALENT DISEASES OF THE DISTRICT.

Mr. STEPHENS said in his district there had been a great mortality from diseases of the respiratory organs; many cases of hæmoptysis had been met with. The deaths had occurred chiefly in old people. He had scarcely any diseases of an infectious nature under treatment.

Mr. BROADBENT said bronchitis, pleurisy, and pneumonia were very prevalent on the north-east coast. He had seen, within the last few days, several cases of hooping cough. There were also some cases of simple continued fever.

Dr. MACLAGAN said small-pox was still present in his district. There had been a fatal case of typhus fever. Scarlet fever was prevalent in Allendale.

Dr. PAGE said, with your permission, Mr. President, I should be glad to lay before the Society the details of a most interesting *post mortem*, which came under my observation a few days ago. Last Saturday, I was telegraphed for to examine the body of a gentleman, near Sheffield, who had died somewhat unexpectedly, after an illness of a few days' duration. The history of the case was briefly this. About three months ago, deceased, a gentleman in a good position, aged 33 years, was in a train on the North-Eastern Railway Company's line, which met with an accident. No one was much injured, and deceased did not feel anything more than very temporary inconvenience from the accident. Fourteen days before his death, up to which time deceased had enjoyed his usual health,

he was seized with violent pain in his head, dizziness, nausea, and occasional vomiting. These symptoms continued about eight days, when he had an epileptic convulsion. The next day he had another convulsion. The day before his death, he complained of pain in the right hypochondriac region, and the next day had another convulsion and died. The senior physician of the Sheffield Infirmary attended in consultation, and both he and the other medical men who saw the case were of opinion that death was caused by some affection of the brain. The friends attributed the death to the railway injury, and hence my connection with the case. We found that death had been caused by the rupture of a branch of the superior mesenteric artery behind the peritoneum, and into the duodenum, about 6 inches from the stomach, the whole of the small intestines being filled with blood. There was an immense clot of coagulated blood in the peritoneum. The brain was absolutely bloodless. I have never seen a brain so actually free from blood. I had no hesitation in giving an opinion that cerebral anæmia was the cause of the convulsions, that this condition of brain depended upon the hæmorrhage, and that the artery had given way in consequence of its being in a state of atheroma, due to constitutional causes, in no way connected with an accident received so long ago as upwards of three months. I hope, sir, this case is of sufficient interest to excuse my taking up the time of the Society by its relation.

Dr. EMBLETON said it was well known that severe hæmorrhage frequently causes convulsions; more especially is this the case when the blood is rapidly poured out, and when the hæmorrhage is fatal. Of course, fatal hæmorrhage does occur without convulsions. He thought Dr. Page's explanation was the correct one.

Mr. H. E. ARMSTRONG asked what was the result of the accident. Did the patient suffer from railway dyspepsia? What was the cause of the aneurism? Might it not have resulted from the accident?

Dr. PAGE said the arteries were in a state of atheroma. The patient so far as he knew had not been a drinker, and had not had syphilis; the railway accident had not caused the atheroma, which was the cause of the aneurism.

Mr. FOTHERGILL asked whether any microscopic examination of the parts had been made.

Dr. PAGE said microscopic examination was unnecessary; the atheroma could be seen by the naked eye.

Mr. MORGAN said the age of the patient was interesting. He had under his care at present a patient, in whom there had been a succession of aneurisms. The first artery affected was the left

femoral: this aneurism was treated and cured by pressure. Another aneurism then formed on the right femoral: this also was treated and cured by continuous pressure. A third tumour then formed on the left femoral below the seat of the original aneurism. This patient is under thirty years of age.

Mr. WILSON said that last session he had exhibited to the Society an aneurism which occurred in a lady 25 years of age.

The PRESIDENT said the Society was obliged to Dr. Page for bringing forward this interesting case. There could but be one opinion as to the cause of the aneurism, viz., atheroma.

Dr. EMBLETON asked whether any member had met with any cases similar to those which he had described at a former meeting, febrile case of eight days' duration, ending in rapid convalescence. He had heard of at least 100 such cases.

Dr. ARMSTRONG said he had seen a considerable number of such cases. The rapid convalescence was very remarkable; the patient seemed to jump all at once from an apparently dangerous state into health.

Mr. FOTHERGILL said some dozen of such cases had lately come under his notice. They were characterised, as Dr. Embleton had said, by distinct and urgent symptoms, followed by a rapid convalescence. He looked upon them as cases of ephemeral fever.

Dr. DENHAM had met with a similar state of things in the South Shields Workhouse. The symptoms were, in many cases, alarming; in several there had been convulsions. He had adopted, with great success, a gentle treatment.

Mr. HEFFERNAN had seen at least five such cases, all children. He had noted as occurring at the same time, some cases of typhoid amongst adults. He looked upon these cases as modified typhoid; there was little diarrhoea, but some tenderness of the abdomen. He had lately met with a fatal case of typhoid from perforation.

Dr. BROADBENT asked if any register of the temperature had been taken.

Dr. EMBLETON said he himself had only seen one case. The temperature had not been taken by the thermometer; the skin felt generally cool and natural; at times there was a temporary flush—there was no permanent elevation of temperature.

Dr. ARMSTRONG said his experience agreed with that of Dr. Embleton. He had not used the thermometer. The tongue looked as if the lungs were congested; there was, however, no such congestion.

Dr. LEGAT said he was of opinion that the cases described were cases of the ordinary remittent fever of children. In the morning

the skin is cool; in the evening pulse quickens, and the skin becomes hot, the face flushed, etc. He had been disappointed with the thermometer; he believed the general symptoms of the patient to be a much more trustworthy guide. In this class of cases he had found purgatives answer well; the patient generally got well in eight or ten days.

Mr. STEPHENS said he had been quite puzzled with a similar set of cases; they were quite different from the old-fashioned remittent fever. There was a peculiar feel of skin, independent of the thermometer, which convinced him that these cases were not any of the old remittent fever.

Dr. EMBLETON agreed with Mr. Stephens, and, in spite of the very valuable remarks of Dr. Legat, he thought the disease he had described was not ordinary remittent fever of children. It did not always end in eight or ten days. He could say a great deal more on the subject did time permit.

NOTES ON A CASE OF EXTRA UTERINE GESTATION.

BY S. W. BROADBENT.

I WAS requested to visit Mrs. H., æt. 32 years, the mother of one living child, and was informed that, four years ago, she considered herself pregnant, but that at intervals she had passed, per rectum, several foetal bones. She was then in great agony in endeavouring to pass more bones, which were lacerating the sphincter and bowel. Under chloroform, all the bones that were within reach were extracted; they consisted of cranial bones, a scapula, ribs, and vertebræ. During the next four years, these bones were passed or extracted, and my patient was improving in her general health, and attending to her household duties, when an attack of choleraic diarrhœa, of twelve hours' duration, proved fatal. An autopsy was permitted 48 hours after death. The body seemed fairly nourished. There was a considerable amount of fat on the abdominal wall and also on the omentum. There were no adhesions, or any other signs of recent or old inflammation, and all the abdominal organs were quite healthy. On examining the pelvis, a tumour, about the size of a large apple, was seen lying between the right broad ligament of the uterus and the rectum, apparently adhering to both. The index finger passed into the anus detected nothing save a considerable dilatation of the bowel within the sphincter, but, on pressure being made on the tumour, within the abdomen, a rough corner of bone was felt, and some cranial bones and a tibia were removed. The tumour was now opened and found to communicate with the second

portion of the rectum by a long slit-like opening, which did not appear to be lacerated by the removal of the cranial bones, and which, it will be remembered, suffered some of the other bones of the head to pass through it unassisted. The most careful search failed to show any communication, or traces of such, between the fallopian tube and the sac. It seems probable that the opening through which the foetus passed out of the tube had completely closed, and a considerable period of rest succeeded before ulceration, or absorption of the coats of the bowel, commenced, and allowed the foetal *debris* to escape. The cyst, in which the foreign body had become enclosed, evidently contracted gradually, as portion of its contents were, from time to time, expelled. The right ovary was in a state of incipient cystic degeneration; the left was healthy. The foetus had been retained eight years.

Dr. EMBLETON said he had listened with great pleasure to the very valuable communication which the President had just read. He thought the details of such a case ought not to be confined to the Transactions of the Northumberland and Durham Medical Society. He hoped the President would consent to publish it either in one of the London or Edinburgh journals.

Mr. BROADBENT said he was much obliged to Dr. Embleton for his kind remarks. He was in the hands of the Society. He would be glad to do what the members wished.

Mr. WILSON said he had seen a similar case last year. In that case the patient had passed, per rectum, some but not all of the bones.

Dr. GIBSON said he had been much interested in this case. He thought such cases ought to be recorded, but they were by no means very uncommon. Records of such cases were to be seen scattered up and down in all the journals. He himself had seen at least twenty or thirty. In a large number of them the bones, or some of the bones, are discharged through the rectum or bladder. In some cases they make their way into the peritoneal cavity; in others, they become encysted, and remain in a quiescent state for ten, fifteen, or twenty years. He knew of cases in which the woman had again become pregnant, and had carried the former foetus, encysted in the peritoneal cavity, for ten, fifteen, or twenty years.

Dr. B. BRAMWELL detailed the history of a case which he had recently met with.

CASE OF ENGLISH CHOLERA CAUSED BY THE INHALATION OF SEWER GAS.

By R. W. FOSS, M.D.

INHALATION of the emanations from sewers, or other decomposing excrementitious matters, is well known and recognised, as the cause of much intestinal derangement, and even of typhoid fever, with or without previous existence of the specific germs, according to the different ideas of different authors, but I am unaware of a case of English cholera occurring and being so distinctly due to the reception into the body of the poisonous vapour of an old cesspool.

The case itself also teaches the imperative necessity of workmen employed in or about sewers or cesspools, especially in summer time, or when the matter has been accumulating some time, of wearing some form of respirator. I believe there is a charcoal form invented, and recommended by Professor Tyndall, for this purpose, and for those working about house gas.

A. B., æt. 65 years, a builder up to Friday, 10th June, 1870, the weather being hot, had been working at the drains about a public-house, and, in the course of his work, had come upon a cesspool, in which sewage must have been accumulating for years; in fact, it was covered with a thick green scum. On Friday, the 10th, he shivered, felt much langour and weariness, and a general feeling of malaise. He was, at the same time, slightly purged. The next day he was in much the same condition. He vomited several times. On Sunday, June 12th, he vomited every half-hour bilious matter, and was purged just as often. Pulse, 95 full, and compressible. Skin covered with abundant cold perspiration. Prostrate. The face presented a livid, contracted appearance. The tongue was red at the tip, and the base furred. There was pain in the scrobiculus cordis. He had not slept last night.

13th June. The purging and vomiting still continue; perhaps, not so often, but they now present a regular rice-water appearance. He has cramps in his arms and legs, also in the left side, *e.g.*, when he attempts to take hold of the handle of a cup the fingers become suddenly extended in different directions, and he is unable to flex them. Pulse 100, small and hard; the tongue as before; still prostrate; much thirst. No sleep last night. A pill, consisting of a grain of opium and half a grain of sulphate of copper, now seemed to diminish the sickness and purging. He was directed to have an enema of starch and turpentine, with opium.

June 14th. Has not retained the injection. Is in much the same condition as before. Skin blue, cold, and covered with perspiration. Pulse 110, small; much thirst. Sickness and purging as before; no sleep; cramps still continue; no urine passed. In the course of the day

he became worse. In getting out of bed, during the afternoon, he fell, and was convulsed. The purging and vomiting ceased now, but he was thoroughly prostrate, with an almost imperceptible thready pulse, hoarse voice, and speech incomprehensible. He remained in this collapsed condition till near 11 p.m., when he expired.

With respect to the treatment, at first he had the *mist cretæ* usually prescribed for diarrhœa, with brandy, and light nourishment. Afterwards, I had the assistance of Mr. Charles Trotter, who advised pills containing $\frac{1}{8}$ grain of croton oil, and $1\frac{1}{2}$ grs. of calomel, every quarter of an hour, together with an occasional draught of hydrocyanic acid for the vomiting and the injection before mentioned.

It is necessary here to remark that the labourer who was working with this patient was attacked with diarrhœa on June 13th, but recovered in a few days. The case, presenting as it did all the signs of Asiatic cholera, and occurring at the time of the year when this affection makes its appearance in this country, caused some considerable alarm to the neighbouring inhabitants.

The question arises whether, considering the fact that the cess-pool in which this man had been working, which had been closed for years, contained germs of cholera, and that he inhaled them in opening this place, and that this was then a sporadic case of true Asiatic cholera.

According to M. Thenard (quoted by Taylor), the two chief gases found in the effluvia of drains and sewers are the sulphuretted hydrogen and the hydro-sulphuret of ammonium, more or less in combination with atmospheric air; also that they appear to act as narcotic poison when highly concentrated, but like a narcotico-irritant poison when much diluted with air. If the person be but slightly affected, he will probably complain of nausea and sickness; his skin will be cold, pulse frequent, and the voluntary muscles, especially those of the chest, are affected by spasmodic twitchings. If more seriously affected, he loses all power of sense and motion, the skin becomes cold, the lips and face assume a violet hue, the mouth is covered with a sanguineous mucus; the respiration hurried, laborious, and convulsive; the limbs and trunk in a general state of relaxation, or there may be violent spasmodic twitchings of the muscles, even opisthotonos. If sensible, the patient will complain of severe pain. These are the symptoms enumerated by Taylor; and although the symptoms in my patient are to some extent similar to these, yet, in their peculiar markedness and course, they bear a much more distinct resemblance to a definite known form of disease, Asiatic cholera. I, therefore, prefer to consider that my patient derived his attack of cholera from the inhalation of sewer gas, just as, I believe, there is much evidence to show that many people have derived an attack of typhoid fever from a similar cause. In

such cases, it is an open question with each person whether he may consider the case to arise from the actual condition of affairs, or he may assume a pre-existent germ.

Dr. EMBLETON asked if Dr. Foss was present; if not, he would propose that the discussion be adjourned.

DISCUSSION ON DR. MACDONALD'S PAPER.

Dr. BROADBENT said the paper was a most excellent one, and Dr. Macdonald had gone so thoroughly into the paper that there was little left to discuss.

Dr. BRAMWELL said I have great pleasure in rising to make a few remarks on this very interesting subject, and, like the last speaker, he begged in the first place to compliment Dr. Macdonald most heartily on his most able and interesting paper. The subject was of great importance, and eminently well fitted for discussion. It was impossible in the short time at his disposal to go into the details of such an extensive subject, he would therefore confine himself to the first part of the paper. In that portion of the paper Dr. Macdonald tried to establish the two following propositions:—

1st. That the relation of hæmoptysis to pulmonary phthisis is not nearly so frequent as is commonly supposed.

2nd. That the source of the hæmorrhage in hæmoptysis is very generally from the capillaries of the bronchial mucous membrane, both in tubercular and non-tubercular cases.

In support of the first proposition, Dr. Macdonald quoted the following statement of Trousseau, viz., "If I were to reckon up all the cases of pulmonary hæmorrhage which I have met with in hospital and private practice, I believe that I should find that in the majority of cases the bleeding did not depend upon tuberculosis." This was the opinion of one man, the illustrious Trousseau, and as such it, of course, must have great weight. It was, however, simply an opinion, and was opposed to the experience of the great majority of physicians; it was also directly contradicted by Dr. Austin Flint and Professor John Ware, the other witnesses brought forward by Dr. Macdonald in support of this part of his argument.

Dr. Austin Flint, in his admirable text book on medicine, states "that he has found many cases in which hæmoptysis was not followed by the signs or symptoms of tuberculous disease." This is a very different statement from that of Trousseau; but a little later on, it is still more modified, for Dr. Flint sums up the argument for and against the relation of hæmoptysis to tuberculosis by the following statement:—"Neither the existence of tuberculosis,

nor a strong proclivity thereto, is to be *positively* predicated on the occurrence of bronchorrhagia."

Dr. Macdonald then quotes the statistics of Professor John Ware, in which 386 cases of hæmoptysis are analysed, of which number 62 recovered completely, the patients living in ordinary health, or having been carried off by some other disease in no way connected with tubercle. In 52 others, similar recovery took place, but the entire history could not be traced out. The remainder, 272, were, therefore, tubercular.

But it must be remembered (1) that it is not always possible to detect tubercle in its early stages. (2) That many cases of early tubercle undergo spontaneous cure. Examples of this are met with every day, and the fact is being daily more recognised. Dr. Walshe, speaking on this point, says—"It is to be remembered that the absence of notable signs of tuberculisation does not justify the inference that the hæmoptysis is not phthisical, seeing that a tremendous pulmonary hæmorrhage may occur when slight consolidation exists at one apex only, and that such a consolidation might be supposed to depend upon the presence of an aneurism. The fact that individuals are occasionally met with who, after having had more or less profuse hæmoptysis, live on to a good old age without exhibiting phthisical symptoms, does not invalidate this result. It simply confirms the inference clearly attainable on other grounds also, that tuberculisation tending to hæmoptysis may, as well as that not so tending, undergo spontaneous suspension." We must, therefore, add to the 272 those cases (and they are probably many) in which the tubercular deposit could not be detected, and in which a spontaneous cure took place.

Probably some of the 52 doubtful cases were also tubercular; these must, therefore, also be added.

Again, we know that pulmonary tuberculosis is a disease of early life, the great majority of cases occurring in persons under forty years of age; but in these statistics no mention is made of age, and hence it is reasonable to presume that many of the 386 were persons over forty, and in these cases the hæmoptysis probably depended upon other conditions, such as cardiac disease. No doubt, in a certain number of the cases under forty, the hæmorrhage was also caused by non-tubercular conditions.

The conclusion, therefore, which I would draw from these statistics, as well as from personal experience, and from the experience of most physicians is, that hæmoptysis in the young in the majority of cases related to pulmonary phthisis; in short, that the commonly received notions on this point are tolerably correct.

Dr. Macdonald's second proposition is, that the hæmorrhage in cases of hæmoptysis does not, as is commonly supposed, proceed from the pulmonary parenchyma, but that it comes from the bron-

chial mucous membrane; and since no lesions of this membrane have been discovered in fatal cases, he concludes that it is poured out from the capillaries of the part, and that in many cases this is accomplished by a process of exhalation. He further argues that severe copious, even rapidly fatal, hæmorrhage, as the case quoted from Trousseau, may be caused in this manner.

The arguments he brings in support of this second proposition, are as follows:—1st “We find that other mucous surfaces are liable to attacks of hæmorrhage,” and I would here at once grant that there is no *a priori* reason why bronchial hæmorrhage should not occur; indeed, I believe that it frequently does take place, but I am firmly of opinion that in these cases where it is profuse and alarming, it cannot proceed from the capillaries of the bronchial mucous membrane. If it is bronchial in such cases, the blood must be passed out from a vessel of some size. Now, such hæmorrhage does occur from other mucous surfaces. To give you an example, Dr. Mickle, one of our house-surgeons, was called the other night to a patient in this Institution, who was bleeding profusely from the mouth. The patient, a man, was suffering from a fracture of the leg; he was otherwise in good health. The hæmorrhage had come on suddenly, without any apparent cause; he had certainly not received any injury. On examination, the blood was seen to be poured out *per saltum* from a good sized artery, situated under the tongue. Here there was a case in which profuse hæmorrhage proceeded from a mucous membrane; from an artery of the part. Venous hæmorrhage may also doubtless take place from mucous surfaces.

If, therefore, the hæmorrhage is copious, it, in my opinion, proceeds, in all probability, from a good sized vessel. If it is small in quantity, there is no *a priori* reason why it should not come from the bronchial mucous membrane, but in those cases where there is lesion of the pulmonary tissue, and this is the case in phthisis, it is in my opinion more rational to place the source of the hæmorrhage in the strictly diseased point, viz., the pulmonary parenchyma, than in the bronchial mucous membrane, which is found perfectly normal after death. The opinion of Walshe on this point is very strong, it is as follows:—“Setting aside those instances, mere curiosities from their singularity, in which ulcers in the bronchial tubes or plastic bronchitis furnish the blood in hæmoptysis, I have never yet seen a case where blood discharged in any quantity during life either seemed from the nature of the case clinically or was proven on inspection of the bronchial tubes to have come from their substance by molecular ruptures and by exhalation.”

2nd. “Cases are met with in which a previously healthy person is seized with alarming hæmoptysis, but completely recovers, and no sign of pulmonary disease can be subsequently discovered.”

Therefore, says Dr. Macdonald, the hæmorrhage must have been bronchial. Now, in this proposition it is assumed, firstly, that no persons who are affected with phthisis recover. Secondly, that it is always possible to detect phthisis; and thirdly, that no hæmorrhage from the pulmonary tissue, can take place unless that tissue is in a state of tubercular disease. All of these assumptions are, in my opinion, fallacious, and, as I have already stated, that if the hæmorrhage is in such cases bronchial, it must be passed out from a large vessel.

3rd. "There is *post-mortem* evidence of the occurrence of bronchial hæmorrhage." In support of this very definite proposition, Dr. Macdonald states a single case, in which the patient, a girl æt. 13, died in five minutes, the blood gushing up and issuing from the mouth and nose. "On *post-mortem* examination, the stomach was found filled with blood, but there was no lesion of that organ. The hæmoptysis was bronchial. The lungs were riddled with softened tubercles, and in the upper part of both there were extensive cavities. From both lungs, when cut into, a large quantity of blood welled out from the ramifications of the bronchial tubes. No ruptured vessel was found, and, strange to say, the cavities themselves did not contain blood." Now, it must be remembered that it is a matter of extreme difficulty to detect the ruptured vessel in such cases; anyone who has examined such a lung will at once appreciate this, and hence we are not justified in concluding that no vessel of the pulmonary tissue was ruptured, because the point of rupture was undetected. Again, we had in this case conditions of the pulmonary parenchyma most favourable for such a rupture. The character of the hæmorrhage, too, was such that it could not, for the reasons I have already stated, be from the capillaries of the bronchial mucous membrane, and no lesion of this structure was found after death.

In connection with these cases of severe hæmoptysis the observations of Dr. Rasmussen, a Swedish physican of eminence, are of great value. This physican has recorded eleven fatal cases of hæmoptysis, and in all of them he found minute aneurisms, varying in size from a small pea to a walnut, in branches of the pulmonary arteries. In most of these cases the arterial branch in which the aneurism occurred was situated in the wall of a tubercular cavity, in one case, in the wall of a dilated bronchus. In this case, he observes, there were no physical signs of disease during life. Now, in all these cases, he found the ruptured part. In one case the aperture was closed by a clot, hence he believes that such hæmorrhages may be recovered from, and in this way we have an explanation of the condition of those cases of profuse hæmorrhage which occur in cases where no physical signs of disease can be detected during life. Since he gave his attention to the subject, he has

always detected these minute aneurisms after death, and he believes that they are always the cause of these profuse hæmorrhages. In this way we may explain those cases which are brought forward by Dr. Macdonald in his fourth argument. It is possible that in some such cases the hæmorrhage may be bronchial, but as I have before stated, if so, it is not, in my opinion, capillary.

These, then, Mr. President and gentlemen, are the reasons which have led me to differ somewhat from the conclusions of Dr. Macdonald. I had intended to have added other arguments and the opinion of several authorities in support of my own view of the case, but I have already occupied a great deal too much of the time at our disposal.

Dr. EMBLETON said he had read the paper with great pleasure. It was a most excellent paper. He thought Dr. Macdonald deserved great credit for the very exhaustive manner in which he had gone into the subject. In his opinion, the paper was one of the best which had been read before the Society. The Secretary had criticised the paper very closely. He would be sorry to have any paper of his put to such a critical examination. He saw no reason why hæmorrhage should not take place from the bronchial tubes. Vicarious menstruation often gave rise to hæmorrhage of this kind. Dr. Macdonald had made a slight anatomical error in his paper. He had described the air cells as being lined with epithelium. The fact was, there was no epithelium here. In the experiments described by Dr. Macdonald, if epithelium was found after death in the air cells, it had probably got there from the bronchi.

Dr. GIBSON thought Dr. Macdonald had shown that bronchial hæmorrhage does take place. We know that it takes place from all other mucous membranes, and it, therefore, takes place from the bronchial mucous membrane. He believed that in a large number of instances the hæmorrhage is poured out from the bronchial mucous membrane. There was not, in his opinion, such a close relation between hæmoptysis and phthisis as is generally supposed. In many cases the two are completely independent. The hæmorrhage is simply one comparatively little circumstance in connection with the deposit of tubercle.

Dr. PHILIPSON had read the paper with great pleasure. He thought it carried great weight, and showed that great care had been given to its preparation, and in the working out of the theory which it supported. The chief parts which he recognised in connection with hæmoptysis were—Firstly, that there was a rupture of some vessel; secondly, that the cause of that rupture was either an active or a passive hyperæmia. The former is seen in pneumonia; the latter in congestion of the lungs, following cardiac disease. The cause of the rupture in other cases was, in his opinion, an irritation,

and where the irritation was, there would be the point of rupture. In tubercular cases the irritation is generally in the air cells, and, therefore, the hæmorrhage is generally from the pulmonary parenchyma. If the irritation is in the bronchi, then the hæmorrhage will be bronchial. He would allow a bronchial hæmorrhage, in many cases, as from turgidity of the mucous membrane, or from plastic deposit seen in plastic bronchitis. These cases were not tubercular. Hæmorrhage from the air passages was always to be looked upon with great suspicion, and was always a matter of great anxiety.

Mr. H. E. ARMSTRONG thought the analogy should be looked to. If hæmorrhage takes place from all other mucous membranes, of course it takes place from the bronchial mucous membrane.

Dr. MACDONALD said he thanked the various members who had spoken for their criticisms, both favourable and unfavourable. He could not remember all the points touched upon. He would like to point out that all cases of phthisis were not tubercular phthisis—indeed, phthisis need not be tubercular at all. Catarrhal pneumonia may go on to cheesy metamorphosis and to the formation of cavities. Hæmorrhage may give rise to catarrhal pneumonia, and as a result of this catarrhal pneumonia may follow true tubercular deposit. He thanked Dr. Embleton for his criticism, but he begged to differ from him. Many modern pathologists believed the air cells of the lungs were lined by epithelium—for instance, the great German pathologist Reinfleisch. He thought the presence of epithelium had been distinctly proved. He again thanked the members most cordially for the manner in which they had received his paper. He said he was about to leave this country for Canada. He would always remember with pleasure the meetings of the Northumberland and Durham Medical Society, and he hoped he might be able to send home to the Society other papers.

Mr. BROADBENT, in the name of the Society, thanked Dr. Macdonald for his most excellent paper, and wished him every success.

DISCUSSION ON DR. PHILIPSON'S PAPER.

Dr. GIBSON said that although he had moved the adjournment of the discussion of Dr. Philipson's paper, yet he had very little to say on the matter. The case was so thoroughly and carefully recorded, that there was little left to discuss. He was not aware, at the time he moved the adjournment, that any similar case had previously been brought before the Society. He did not see why Dr. Philipson had called the case one of lymphæmia. It ought to have been leucocythæmia. He recognised three classes of cases. In the first,

the spleen alone was affected; in the second, the lymphatic glands alone; in the third, both spleen and lymphatics. Dr. Philipson had stated that the blood clots found after death were made up of white cells; were these cells larger than the cells of normal blood?

Dr. PAGE said Dr. Gibson had objected to the term lymphæmia, because the spleen was affected as well as the lymphatic glands. He thought Dr. Philipson had used the term correctly. Dr. Bennett, who had first described the disease leucocythæmia, applied the term to those cases in which the spleen alone was affected. In other cases, where the lymphatics alone were involved, the disease was called leucocytosis; where both spleen and lymphatics, the case was one of lymphæmia. Such it had been correctly termed by Dr. Philipson.

Dr. EMBLETON asked whether the red corpuscles were altered in form. In many diseases the red corpuscles as well as the white underwent remarkable changes.

Dr. PHILIPSON said Dr. Gibson was perfectly correct in believing the case was an uncommon one; he had reported a similar one to the Society four years ago. He distinguished the forms of enlarged spleen, the enlarged spleen of malaria, a simple hypertrophy, and the enlarged spleen of leucocythæmia, in which the white corpuscles were so greatly increased. With regard to the term leucocythæmia, he looked upon it as indicating a condition of the blood; lymphæmia was distinctive of the cause of the condition of the blood, viz.. splenic and glandular enlargement; the term was, therefore, not inapplicable. He thanked the members for the manner in which they had received his paper.

SCALE OF INCHES



EXTERNAL SURFACE OF CALCULUS.



TRANSVERSE SECTION.



LONGITUDINAL SECTION.

DR. ARMSTRONG'S CASES OF STONE IN THE BLADDER.

Dr. ARMSTRONG said, I am indebted to my dresser, Mr. Samuel Braithwaite, for the notes on the two following cases :—

No. 1.—STONE IN BLADDER.

JOHN CHIPCHASE, miner, æt. 36, Leasenthorpe Colliery. Admitted 19th November, 1874. Suffering from stone in bladder, which can very readily be detected by the sound.

Present Condition.—Patient a spare man; walks with two sticks, on account of the intense pain. Eight years ago, began to feel pain at end of penis, which gradually got worse up to the present time. Frequently while passing water the stream stops suddenly. Once or twice has passed blood. Upon examination, with sound, a calculus is distinctly felt upon the first attempt. Appetite poor. Bowels very regular. Sleeps badly at night.

Nov. 24th.—Patient put under chloroform at 9.40 a.m. and operated upon. On introducing the forceps, the stone was immediately seized, but could not be extracted for some considerable time, the lithotrite being tried, but it had only the effect of chipping off a few small pieces. It was eventually drawn out with the lithotomy forceps, and was of very great size, weighing 3 oz. 5 drs. 1 scr. The parts were necessarily much bruised from the removal of so large a stone, part of it also being imbedded in the wall of the bladder. The ordinary tube was introduced.

4 p.m.—Complains of intense pain in lower part of abdomen, in penis, and in perineum. To have hot fomentations applied. Milk and barley water to drink.

12 p.m.—Pain much less severe. Poultice to part. To have morphinæ acetatis gr. $\frac{1}{3}$ subcutaneously every night.

25th.—Feels better; to keep on poultices. Brandy \mathfrak{z} iv and soda water. M. p. 110; temp. 103.8. E. p. 108; temp. 102.4. Has felt pretty easy during day.

26th.—Passed a good night. Tube removed. Complains of pain in stomach. Takes his food pretty well. M. p. 110; temp. 102.4. E. p. 108; temp. 102.4.

27th.—Slept fairly. No tenderness over bladder. Has a severe pain in back. M. p. 108; temp. 101. E. p. 110; temp. 101.8.

28th.—Had a restless night. Uneasy all day; vomiting. Bowels freely moved. M. p. 95; temp. 100.6. E. p. 96, thready and small; temp. 101.2.

29th.—Slept well; no sickness. Still pain in back. Tells me that 15 years ago had an injury to his back which caused him to be off work 12 months. M. p. 90; temp. 101.2. E. p. 90; temp. 101.4.

30th.—Had an uneasy night ; tenderness over bladder. All urine comes through the incision. Hot fomentations. Bowels free. Takes food fairly. Sweats much. M. p. 94; temp. 100·6. E. p. 100; temp. 103.

Dec. 1st.—Slept well. Has kept well all day. M. p. 100; temp. 101·2. E. p. 105; temp. 102·4.

3rd.—Had good night. About 6 p.m. had very severe pain in pit of stomach, which was relieved by hot fomentations and a free evacuation from bowels. M. p. 105; temp. 101. E. p. 90; temp. 101.

5th.—Not so well to-day. Had a slight rigor yesterday. Urine comes away by opening. A very strong uriniferous odour prevails. M. p. 90; temp. 99·8. E. p. 104; temp. 100·6. [In same ward is a patient dying of pyæmia.]

7th.—Does not look well. Eats badly; feels ill. Is perspiring profusely. Tongue foul; red in centre. Bowels free. M. p. 100; temp. 101. E. p. 102; temp. 101·4.

10th.—Is very restless. Does not know where he is bad. Feels weary and sore. Tongue red; dry. Looks anxious. To have morphiae suppository in place of injection. M. p. 90; temp. 101·2. E. p. 102; temp. 102.

13th.—Still restless. Had great pain in penis, relieved by hot fomentations. Bowels free. Had a desire to pass water by urethra, but none came. E. p. 105; temp. 100·4.

15th.—Bowels moved; a large discharge of pus accompanying the evacuation, mixed with blood. Felt easier afterwards. To have a suppository at bed time instead of subcutaneous injection. M. p. 90; temp. 99·2. E. p. 114; temp. 100.

17th.—Had a better night; looks fresher. Eats well. Bowels moved; pus present. Tongue moist and clean. To have no suppository or draught, or injection. Some stringy mucus, strongly ammoniacal, discharged from wound. M. p. 94; temp. 99. E. p. 96; temp. 100.

20th.—Seems to be going on well. Bladder washed out by urethra, and being emptied through wound with a weak solution of condy. Much stringy ammoniacal mucus discharged. P. 100; temp. 101·1.

24th.—Slept pretty well. Pain again in penis and over bladder, relieved by hot fomentations. Appetite not so good. P. 120; temp. 100.

28th.—Still severe pain in penis and over bladder. Water all coming away by wound, also some pus. Thompson's sound was attempted to be passed through the urethra, so as again to wash out the bladder, but it met with an obstacle about the prostate, and caused intense pain. On drawing out the instrument the end was covered with pus, clearly denoting that it had met with an abscess. Bowels free; appetite fair; sleeps middling.

31st.—Yesterday, passed four ounces of urine by urethra for first time, mixed with pus. To-day, passed a pint of urine without much pain. Wound looks dirty. Stringy mucus still comes through pus. P. 120 ; temp. 100·2.

Jan. 3rd.—Has passed no more water by urethra. Wound looks less, cleaner, and healthier. Boracic lint placed over it. Bowels free ; eats and sleeps well. P. 100 ; temp. 102.

9th.—Has had an attack of pneumonia. Rusty coloured spit ; pain ; high pulse and temperature. It is now receding. He now passes all his water by urethra. The wound is gradually closing.

13th.—Improving ; the pneumonic symptoms steadily decreasing. Can retain his water about an hour. Wound is filling up beautifully. P. 102 ; temp. 101·2.

17th.—Doing well ; the lint covering wound is just damped by a slight oozing in the course of the day. Bowels free. P. 99 ; temp. 100.

23.—Is getting up a little now every day. Feels very weak ; appetite gradually improving ; bowels acting well. P. 100 ; temp. 100.

28th.—Doing well ; wound entirely healed. Gaining strength ; will soon be able to go home.

30th.—Discharged.—Cured.

No. 2.—STONE IN BLADDER.—VESICO-VAGINAL FISTULA.

ALICE PICTON, æt. 16, 12, Temple Street, Newcastle. Admitted 26th October, 1874, suffering from stone in bladder, which could be readily detected per vaginam, a vesico-vaginal fistula existing. Her mother states that twelve years ago she began to suffer much from pain in pelvic region, with œdema of vulva. Since then she has never been able to pass her urine by the urethra, always coming through the vagina. She has been more or less confined to bed during this period ; but two or three years ago she was under the care of the Dispensary, and obtained some relief, so much so as to be able to go about for a while, but her symptoms soon began to get worse again.

Present Condition.—Patient thin, ill-developed, badly nourished girl, with an anxious expression, indicative of constant suffering. Upon examination, per vaginam, there is felt, within easy reach of the finger, a hard, uneven, rough body, which is found to be a stone. Her water constantly dribbles away per vaginam. There is great œdema and tenderness of the labia externa, constant pain, deep-seated, referable to the neighbourhood of the bladder. She states that almost every afternoon the pain is so severe as to cause her to cry out. She also complains of pains down the back part of her thighs as far as the knees. Appetite poor ; bowels regular. Rests

badly at nights. Hot fomentations to be applied to vulva, and a poultice at bed-time. To be put upon good nourishing diet—milk and beef tea.

Nov. 4th.—Swelling much reduced; health improving; to continue. As soon as swelling has sufficiently abated intend to operate.

10th.—At 10·30 a.m. put her under chloroform, and, with great difficulty, crushed and removed several large and irregular pieces of stone, about the size of chestnuts. Two were left imbedded in bladder for a future operation.

11th.—Has been suffering much pain and distressing sickness. Hot flannels to be applied to vulva.

15th.—Feeling much better. There is still much swelling, hardness, and soreness.

19th.—Swelling less; appetite improved; very little pain; has been able to retain her water for an hour once or twice.

24th.—Gaining strength daily; has been up for an hour or two.

29th.—Still improving; looking better, but cannot retain her water, except when she lies in bed, and then only for a very short time. Bowels free.

Dec. 13th.—Not so well to-day; has headache. Pain in lower part of belly and labia externa, but not much swelling. Looks as if she has caught some cold. To remain in bed.

16th.—Somewhat better; has occasional deep-seated pains in region of bladder; cannot retain her water; it dribbles away constantly.

22nd.—Continuing much the same.

29th.—Complaining of more pain; otherwise, as usual.

Jan. 2nd, 1875.—Was up a little to-day, but had to go to bed again, and suddenly a large discharge of matter came from vagina, as if an abscess had burst. Pain easier.

6th.—Feels better since the abscess burst. Intend operating as soon as she feels well enough.

12th.—All pain gone almost; water still dribbles away. The remaining stones can be distinctly felt with finger.

24th.—Put under chloroform; three or four more pieces of stone removed.

25th.—Very sick after the chloroform.

28th.—Much better; says she can feel another piece of stone in vagina. Several pieces of grit have come away.

31st.—Put under chloroform; two more pieces extracted, one very large. No more to be detected.

Feb. 6th.—Improving in every way; intend sending her out for a while before operating for the vesico-vaginal fistula.